Comparative ethnographical studies

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AN ETHNO-GEOGRAPHICAL ANALYSIS OF THE MATERIAL CULTURE OF TWO INDIAN TRIBES IN THE GRAN CHACO

[Title Page]

by

Erland Nordenskiöld

Comparative ethnographical studies

I

AN ETHNO-GEOGRAPHICAL ANALYSIS OF THE MATERIAL CULTURE OF TWO INDIAN TRIBES IN THE GRAN CHACO

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Erland Nordenskiöld

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GÖTEBORG 1919
KLANDERS BOKTRYCKERI AKTIEBOLAG

PREFACE

122 128 *My intention to collect my comparative work on the material development of the South American Indians into three volumes and make it accessible to the American public, has been done at the suggestion and expense of Consul-General Axel Johnson, the managing director of the steamship line that bears his name. The Johnson Line has to a very great extent helped to further the connection between the South American republics and Sweden. Thanks to this there is now a regular service of steamers from Sweden to most South American harbours of any importance.*[1]

000 *The Johnson Line has also endeavoured to further Swedish exploration in South America. Swedish explorers who have lately travelled in that continent, have in every way been supported by it in their work. Most explorers have also had the privilege of going from Sweden to South America in the comfortable Johnson Line steamers. Consul-General Johnson has rightly realized that the scientific results of explorations by Swedes in South America in the first place should be made to benefit South American explorers. Consequently he has, as*

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[1] *The exports from Sweden to South America, as well as the imports from that country have greatly increased in recent years. For instance in 1904, when the Johnson Line was founded, the value of the exports from Sweden to the Argentine was £ 41 550; in 1913 it amounted to £ 488,055. Corresponding figures for Brasil are £ 5 500 and £ 126 830. The steam tonnage of the Johnson Line was 44 000 tons d. w. in 1913, including two motor ships of the latest type. Now, after the World War, it is a fleet of 17 ships, making a total of 115 000 tons d. w. with 9 motorships. Since the Johnson Line was started several good Swedish firms have been established in Rio de Janeiro, Buenos Aires, Santiago de Chile and other places. In Sweden a knowledge of and an interest in South America has been immensely promoted by the Johnson Line.*

stated above, defrayed the expense of publishing this book. He hopes, as the undersigned does, that not only the commercial but also the scientific interchange between the South American republics and Sweden will be a bond of mutual friendship and intercourse between the peoples of these countries. The rapid development of the South American states in every department during the last decades has been observed in Sweden with respect and admiration and we are convinced that this development after the world war, will progress with still greater speed.

The present edition is a translation made from the original edition published in 1918, and the subject matter in the two editions is practically identical. Opportunity has been taken to correct a few mistakes and to add a few additional notes. For the translation I have to thank my friend, Mr. G. E. Fuhrken, M. A., of the University College of Gothenburg.

Gothenburg, April 5, 1919

Erland Nordenskiöld.

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I.

Introduction and Plan of the Work.

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In the following pages I will attempt to analyse the material culture of two Indian tribes and contribute to our knowledge of their history. For the material of my investigations I have taken two tribes in the Gran Chaco of S. America, the Choroti and the Ashluslay, of whom I gained some considerable first-hand knowledge during my journey in 1908—09. It is only of late that these tribes have been made the object of study.[1] Their culture is much of the same kind, and has been preserved in tolerably complete primitiveness.

A c 114 197

Hunt[2], who has studied the language of the Choroti and the Ashluslay, would identify the latter with the Chunupi, a Chaco tribe that has been known for a long time, but his assumption seems to me insufficiently established. In proof of this I here give a few common Ashluslay words, taken from Hunt's list of words, and place beside them equivalent Chunupi words, taken from Lafone Quevedo[3].

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[1] Cf., in addition to my own works, those of Hunt, v. Rosen, Herrmann, and Lehmann-Nitsche.

[2] P. 257. In these notes only the page or the illustration is referred to, to which attention is drawn. The title of the work in question must be sought in the bibliography. Where more than one work is given under an authors name, a number is assigned to each work and quoted in these notes.

[3] (1), p. 122.

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	Ashlüslay.	*Chunupi.*	
	acc. to	acc. to	
	HUNT.	FONTANA.	PELLESCHI.
Head	kās-Shatish	Niscan	Niscun
Hair of the head	thlai-Yis	Nojovec	Nahono
Eye	Tosij	Tacqui	Tuclecbapé
Nose	Naash	Nijiveppe	Nihip
Ear (my)	Yi-kfe	Masleguep	Maij-lumbepp
Mouth	Ashi	Guevep	Lóc-quebebb
Hand	Pakat	Isivep	Itzibeb, I-sip
Sun	Hyanchāklai Shanchāklai Finchāklai	Oló	Oló, Olôh
Moon	Hyuwekla Shuwekla Fyuwekla	Cocpi	Chulpi
Fire	Itoj	Nie	Ni-hiet
Water	Inaat, Inat	Maa	Muá

As can be seen, there is not the least resemblance between the Ashluslay and Chunupi languages.

The Choroti language is closely akin to that of the Mataco. HUNT holds the tribes belonging to the Mataco group to be very old inhabitants of the Chaco, from whose language other people took words for plants and animals that were new to them when they migrated to the Chaco. The Ashluslay language seems to have much in common, both lexically and grammatically, with those of the Mataco and the Choroti.

BRINTON[1]) was already of the opinion that the Mataco group represented the oldest population in the Chaco. He writes, »It is noticeable that all its members reside in contiguity, as if driven together by outer pressure on all sides.»

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[1]) (1) p. 181.

A 101 The Ashluslay are called *Suhin*[1]) by the Lengua-Mascoy, *Etéhua* by the Tapiete, *Áshli* by the Choroti, *Sówua* or *Sóuwash* by the Mataco, and *Sotegraik*[2]) by the Toba.

They call themselves *Ashluslay*, as I have ascertained, and this is confirmed by Hunt[3]). The latter says it is the settlers on the lower Pilcomayo that call them Chunupi, a circumstance which has evidently misled him to identify them with a tribe of that name which has been known for a long time. The statements of settlers are to be taken with caution. An error of the same kind is to call the Ashluslay Tapiete.

C 101 The Choroti call themselves *Yóshuaha* (*Yóʃuaha*, acc. to Hunt.) However, I have preferred the former name, this being, moreover, the form in which it generally appears in the literature of the subject. It derives originally from the Chiriguano. They are called *Mánuc* or *Mániuc* by the Mataco.

A C 172 No archaeological investigations of any kind have been carried out in the territory of the Choroti and Ashluslay Indians. Not a single old grave, not one old dwelling has been examined there. And probably an archaeological examination of their territory would yield but little. It is exclusively the modern civilisation of these Indians from which we will try to draw some conclusions anent their history.

A C 131 The Choroti and the Ashluslay live on and in the vicinity of the Rio Pilcomayo, a considerable river which flows down from the Bolivian plateau into the Rio Paraguay.

A C 133 For the greater part the Rio Pilcomayo is not properly navigable. About where it cuts the tropic of Capricorn it loses itself in extensive swamps, the well-known «Esteros del Padre Patiño». It has a very unsettled course. More than once it has changed its course, and as you go from the

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[1]) Hunt, p. 457.
[2]) Frič (1) p. 410.
[3]) p. 457.

A C 133 river into the interior you will find numerous remains of old river-beds, which in places now form lakes. A few miles from the Andes there is not a stone to be found in the Chaco. The soil consists of fine earth, which is transformed in the dry season into whirling dust, and in the rainy season into mud. In the dry season large tracts are flooded. The Rio Pilcomayo is also of great importance to the Indians on account of the abundance of fish in it.

A C 137 The woods alternate in the Gran Chaco with grassy plains. In some districts there are considerable clumps of palms, not those with paripinnate leaves, which are so useful to the Indians, but with fanshaped leaves, which are of little use. There are no trees from whose bark cloth can be made, as in the primeval forests of N.E. Bolivia. In the woods there grows, however, a spiny plant[1]), known as Caraguatá[2]) or Chalmar[3]). It is of great importance to the Indians, its filaments providing them with material for string rope, clothes etc.

The arrow-grass[4]) which can be used for so many purposes, is lacking in the Chaco. Edible wild fruits occur in the Chaco in an abundance that is quite unusual in S. America. Some of these, such as Algarrobo[5]) Chañar[6]) Tusca[7]) and Mistol[8]), are of supreme importance to the Indians. The abundance of wild fruits, as well as the intensive dryness during part of the year and the floods during another part, account for agriculture being so undeveloped in the Chaco.

A C 136 The stock of game is poor in the interior of the Chaco, or at least in such parts as I have visited. The most important bags are field-voles, and in some places ostriches and small deer. A C 136

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[1]) Bromelia.

[2]) Guarani.

[3]) Quichua.

[4]) Gynerium saccharoides.

[5]) Prosopis.

[6]) Gourliea decortitans.

[7]) Acacia aroma.

[8]) Zizyphus Mistol.

The Chaco is intersected by the tropic of Capricorn, and is as a rule very warm. When the cold S. wind sweeps over the plains, however, it is bitterly cold, especially in May and June, and then the Indian, too, likes to wrap himself up in something warm. A C 132

A civilization very similar to that of the tribes here mentioned is possessed by their neighbours, the Toba, Mataco, Tapiete and Lengua, as well as some other Indians belonging to that part of the Chaco which is included in the Republic of Paraguay. 000

In reality the present work deals, not only with the civilization of the Choroti and Ashluslay Indians, but equally with that of the Mataco, Toba, Tapiete and Lengua.

In the Chaco Boreal dwell the little known Tsirakua Indians. Near the Andes dwell the Chiriguano and Chané. The former of these, who are Guarani Indians, emigrated to these districts as late as the early 16th century. They came from the territory E. of the Rio Paraguay.[1])

It was the Chané Indians, at least in part, that had to yield to the Chiriguano the territories where the latter settled at the beginning of the 16th century, and where they still live to-day. They made slaves of the Chané. Remains of this tribe still dwell, as we have mentioned, in the same parts as the Chiriguano. They are now Guaranified.[2]) Yet a few of the Chané still have something of their original language. It is an Arawak language, and thus belongs to the most widely spread linguistic family in the whole of America. At the beginning of the 18th century numerous Chané Indians were still living in the Chaco Boreal, not far from the Rio Paraguay, where they were vassals of the warlike Mbayá. They are described as being of a higher civilization than their masters. Sánchez Labra-

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[1]) Nordenskiöld (13).

[2]) Nordenskiöld, (8 B) p. 157.

ODD dor, to whom we are indebted for a detailed account of their manners and customs, calls them Chanà.

As far as we know, the Incas never seem to have conquered the Gran Chaco. Not until the middle or the end of the 15th century, according to tradition[1]) did they conquer the mountainous region between Cochabamba and Sta. Cruz de la Sierra, under Tupac Inca Yupanqui. On the other hand they presumably extended their rule in N. Argentina as far as Tucuman, and therefore to the Chaco Austral.

Thanks to the researches of the distinguished Swedish archaeologist, **Erik Boman**, and others, numerous objects have been exhumed in N. Argentina which are characteristic of the Incas. **Max Uhle**[2]) has proved beyond doubt that the pre-Incan Tiahuanaco or Aymara civilization extended to N. Argentina.

This remarkable civilization, called after the famous Tiahuanaco ruin, also touched the Chaco at another spot. In the district between Cochabamba and Sta. Cruz de la Sierra I found quantities of pottery undoubtedly attributable to the same civilization.[3])

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This shows us that in studying the history of the Chaco tribes we may expect cultural influences from the Guarani Indians that came from the east, i. e. the Chiriguano, from the Arawaks, i. e. the Chané, and above all from the civilized tract in the west, i. e. from the bronze age civilization of the Quichua and Aymara, which in many respects stood so high. Probably, too, cultural influences may have reached the Chaco tribes from the civilized tract in the west through N. Argentina, i. e. by means of the Diaguita and Humahuaca. We might even expect to find among the Choroti and Ashluslay cultural influences deriving from the tribes that in the south inhabited the Argentine pampas.

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[1]) Nordenskiöld (12).
[2]) Uhle (3).
[3]) Nordenskiöld (14).

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6
Ashluslay SK5

To these must be added obvious cultural elements that have come directly or indirectly from the white races. A C 174

The task before us is now to determine, as exactly as possible, these conjectural influences from various sources, and to define their nature and range; also, if possible, to find out from what districts the Choroti and Ashluslay originally started for the tracts they now inhabit. A C 121

To this end I have adopted the method of marking on the map of S. America the geographical distribution of a great number of cultural elements characteristic of the Choroti and Ashluslay, i. e. I have marked on the map, as exactly as possible, the distribution of each cultural element throughout the S. American continent A C 128

I have therefore attempted to draw up maps of the weapons, ornaments, articles of clothing, household utensils, and so on, characteristic of the Choroti and Ashluslay Indians in South America.

I have likewise tried to sketch maps of the distribution of various examples of technical skill exemplified by these Indians For this purpose I have turned to literary studies, besides utilizing the extensive collections that I made during my travels in S. America.

Thus, for instance, in determining the distribution of a cultural element, I have first mentioned its occurrence among the Indian tribes visited by me personally. These are, in addition to the Ashluslay and the Choroti, the Atsahuaca (in the border-land of Peru and Bolivia), Aymara, Baure, Canichana and Cayubaba (in N. E. Bolivia), Cavino (on the Rio Beni), Chacobo (in N.E. Bolivia), Cháma (on the R. Madidi, a tributary of the R. Beni), Chané (on the R. Itiyuro in North Argentina, and the Rio Parapiti in Bolivia) Chimane (on the R. Maniqui, a tributary of the R. Mamoré), Chiriguano, Churápa (near Sa. Cruz de la Sierra). Guarayú (Guarayos, Bolivia), Guarayú-Pauserna, Huanyam and Huari (near the R. Guaporé), Itonama (in N.E. Bolivia) Mataco (in the Gran Chaco), Mosetene (on the R. Beni), A C 114

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Tambopata-Guarayo (on the R. Tambopata in Peru) Tapiete and Toba (in the Gran Chaco), Tsirakua (in the Chaco Boreal), Yamiaca (on the R. Inambari in Peru), and Yuracáre (on the R. Chapáre and the R. Sécure in Bolivia).

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I have moreover gone through the literature dealing with the Indians of South America, as far as it was accessible to me. In the case of a few cultural elements I could follow in part the statements of FRIEDERICI, PATER SCHMIDT RIVET and others.

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Unfortunately, with regard to extensive tracts, there are but sparse statements about the material culture of the Indians, indeed, about any aspect of the civilization of the Indians. Such tracts as are little known are those round the R. Ucayali and the R. Tapajos. An ideal work for those who would essay comparative investigations similar to the one here attempted, is KRAUSE's about the tribes on the R. Araguaya. One will find there everything one looks for about the tract examined. Of rarely quoted works that I have made use of here, the one by SÁNCHEZ LABRADOR on the Chaná and Mbayá is perhaps the most important.

Of unpublished museum material I have drawn chiefly upon what the Swedish museum had to offer. A great number of valuable particulars have been communicated to me by friends and colleagues, among whom I am indebted to Dr. G. Antze of Hamburg, Mr. Kai Birket-Smith of the National Museum, Copenhagen,(M.C.),Dr. W. Foy, Director of the Rautenstrauch-Joest Museum, Cologne(M. f. V. C.), Dr Franz Heger, Director of the Ethnological Museum,Vienna (M.f.V.W.), Dr.Th.Koch-Grünberg, Director of the Ethnological Museum, Stuttgart (M.f.V.S.), Dr F. Krause, Etnological Museum, Leipzig (M.f.V.L.), Dr J.P.B.de Josselin de Jong, Royal Ethnographical Museum,Leiden, Prof. Dr. L.Scherman, Ethnological Museum, Munich (M.f.V.M.), Dr. Max Schmidt, Berlin, Prof. Dr. E. Seler, Ethnological Museum, Berlin, (M.f. V.B.) Prof. Dr. Karl v.d. Steinen,Berlin, and Dr. G. Thilenius, Director of the Ethnological Museum, Hamburg, (M. f. V. H.).

Ashluslay

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For several reasons I have confined myself to an investigation of the material culture of the Choroti and Ashluslay Indians. Maps elucidating the geographic distribution of certain conceptions and social circumstances can of course also be put together. Unfortunately, however, it has proved that in such a task one is continually brought up against the difficulty that primary facts are lacking for vast regions.

I might have taken another tribe than the Choroti and the Ashluslay, and have attempted an analysis of their civilization in the same way. That I should have chosen these particular tribes is due to my possessing a very complete collection of their things, and to these tribes being fairly untouched by the civilization of the white races. In addition to this, I have been greatly interested in the influence of the culture of the mountainous region of the Chaco. In reality, the maps and particulars here given also afford much information about other tribes than those dealt with in the first instance, and I therefore hope that the present work will be of some use to scholars whose researches deal with other parts of S. America.

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A few years ago I published a book of travels[1]) in which I gave a fairly full account of the civilization of the Choroti and the Ashluslay. It will therefore be sufficient in the present work to refer to the data necessary for the tables and maps, i. e. the data calculated to throw light upon the geographical distribution and the origin of the different cultural elements.

Wherever I have come across a reliable authority on, let us say, a certain kind of weapons in the kingdom of the Incas at the time of the Discovery, I have assumed that it

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[1]) »Indianlif«, Stockholm, 1910. There is a Translation into German under the title of »Indianerleben«, Leipzig 1912. There is also a French edition, which is unfortunately very faultily translated, and against which I must warn readers. There are some errors, too, in the German translation.

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occurred throughout that kingdom. Though perhaps not always true, this holds good as a rule, since the kingdom of the Incas appears to have been a well organized country with good connexions between the different parts of it. CIEZA DE LEON[1]) says that in most of the Inca provinces the natives imitated one another so closely that in many respects they could be described as a homogeneous people.

Anyone acquainted with the published works on S. America will understand that it called for very much work to draw up the maps here reproduced. I was unfortunately unable to utilize several important old works[2]) as they are not to be found in the Swedish libraries. The bulk of the books from which I have quoted is, however, considerable. Where I had access to some really good works in one domain, I considered I could spare myself the trouble of hunting for other works in that domain. In other domains where no detailed ethnological works have yet been published, I have tried to get all that is attainable. For places which I have visited myself, I have preferred to rely on my own observations, for which reason the works here referred to about the Indians in the Chaco are not specially numerous.

To judge from the maps it would appear as if the cultural elements often had a patchy distribution, even in parts where external assumptions would point to their being universally present. This may be due to the fact that within considerable tracts of S. America the Indians are still little known, and still more frequently to their having died out or become civilized before being made the object of

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[1]) (1), p. [illegible].

[2]) The language has of course not stood in the way of my making use of a work. It is simply absurd for foreign students to state they have been unable to make use of a learned work because it was written in Swedish. It is one's duty, if one is not acquainted with the language, to employ an interpreter in reading the book. To ignore works as certain English writers are wont to do, merely because they are written in another language than their own, or because they are written in Spanish, Portuguese and French when dealing with S. America, is chiefly their own loss.

Ashluslay

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detailed study. It may also be owing to the age of the cultural elements dealt with, for they are now only preserved by a small number of tribes, and if we are certain that a cultural element has a sporadic distribution over a whole continent, we can as a rule conclude that it is of great age. We must remind ourselves in this connexion that in most of the older writings there is unfortunately no reference to the material culture of the Indians, save as regards their weapons, dress and knick-knacks.

The maps are of course incomplete, since they indicate *distribution.* How difficult it is to make such maps complete, is easily seen from the circumstance that I have been able to supplement to some extent the monographs written about the distribution of various cultural elements in S. America, with the single exception of Foy's on the twine cross, and to this I have myself contributed some matter. However, I venture to opine that the maps are not so incomplete that the whole result of my investigation is thereby prejudiced, especially as I have been careful not to draw up any map of cultural elements, or to draw conclusions with regard to them, where their distribution was insufficiently known to me.

It is scarcely probable that any pre Columbian cultural element here dealt with should have reached S. America by more than one route, i. e., via Central America was well as via the West Indies. But this is a problem I will not touch on in the present work; nor have I touched on the difficult question whether cultural elements reached S. America in pre-Columbian times directly from the Old World.

It may be asked, to what extent an inconsiderable number of faulty particulars can disturb the whole result of an examination of the kind carried out here. Such faulty particulars of course occur in the very unequal and dissimilar works consulted for such a book as this. Yet I do not think they are many. It is improbable, for instance, that an author should assert that the sling was used by a

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tribe when this was not the case. In dealing with primary observations of material culture, these are too easily observed to admit of mistakes. Matters are otherwise in dealing with ideas and conceptions. Here misunderstandings may easily arise. There is also a danger in quoting from translations, as the translator may often make serious mistakes.[1])

Incompleteness of evidence is difficult to avoid, and I am sure other writers on America will have this or that to add to the maps[2]). *It is, however, one thing to add to a map, and another thing to made additions of such importance that they upset the results at which I have arrived.*

As regards the distribution of a great number of cultural elements, I have restricted myself to stating what I have myself observed on my travels. This applies chiefly to such elements about which I have come to the conclusion that I could not draw up a map showing their distribution throughout the S. American continent.

On the maps each tribe has as a rule a number or a lettered number. Thus, the Choroti are everywhere marked 1, the Ashluslay 2, etc. The tribes on the upper Xingú, the Bakaïrí, Mehinakú, Nahuquá, etc. who possess a very congenerous civilization, has been given number 28, in common, in order to economise space, likewise the tribes round Roraima, 47, the tribes studied by KOCH-GRÜNBERG about N. W. Brazil, 48, and those visited by WHIFFEN in an adjoining district, 61. I have indicated in the text which tribes are included under these several numbers.

The localities whence the archaeological material derives, are marked with the letters A to O and a to z. A letter may however stand for a whole row of localities within the same district. This, too, has been done to economize space. The necessary details will be found in the text.

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[1]) Even the translations of the Hakluyt Society, as FRIEDERICI (2) (p. 288) has rightly observed, may be unreliable. This holds good for instance, of the translation of GARCILASSO DE LA VEGA.

[2]) For this reason I have left a few blank pages at the end of the book for the reader to make notes on, and shall be very thankful to receive such notes with permission to make use of them.

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On the maps where the cultural element has probably reached the Choroti and Ashluslay from the civilized parts in the west, I have marked the frontier of the Inca kingdom.

II.

The Migrations of the Cultural Elements.

121 We must bear in mind that, in trying to draw conclusions from the geographical distribution of a cultural element, it is necessary to take account of where it may occur on the basis of natural conditions, the external assumptions for its use being present. There are of course a number of things in the culture of a people which are suited to the circumstances in which that people lives[1].) If, for instance we take a cultural element such as the sling, its distribution is restricted by the circumstance that this weapon can only be used in open ground. On the other hand, the knuckleduster is an element which is independent of external circumstances: it can be used just as well by forest folk as by people in the plains, in the tropics as well as in cold places. Games of chance, again, are quite independent of the external conditions in which a race lives. Cards can be played equally well on the equator as in the polar circle. The same, to take a further example, is true of tattooing.

These cultural elements, which are independent of natural phenomena, generally consist of such as are comparatively or entirely unessential in the struggle for existence. Natural phenomena having set no impediment to their spread, they afford us excellent clues in the study of the migrations of peoples and civilizations.

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[1]) We almost entirely miss this consideration in PATER SCHMIDT's work, »Kulturkreise und Kulturschichten in Südamerika«.

When a people moves from one district to another, it retains as a rule most of its old culture. If the new district offers other essential conditions than the old, a considerable part of the culture of the people must naturally undergo a change. Thus, in 1909 I came across a couple of Guarayú Indians on the Rio Parapati. They had long portable baskets, woven out of paripinnate palm-leaves. As we entered the Parapiti territory the baskets became worn out, but as there were no paripinnate palms in this part, they could not make new ones. If, for any reason, the Guarayú tribe were forced to migrate from their present region to the Parapiti region, they would have to change the type of their portable baskets. Similarly they would not be able to make their bows and arrows from the same material as now; and so on. Actually their material culture would undergo quite a number of changes. Every considerable shifting in the territorial spread of a tribe must have been accompanied by changes in its material culture. Should, for instance, the Indians in the Chaco be forced by circumstances to migrate to more northerly parts, to more exuberant primeval forests, as the rainy woods east of Sta. Cruz de la Sierra,1) their material culture would certainly assume a very different appearance. Sheep-breeding would then be impossible, clothes and ornaments of wool or pelt would disappear; the Caraguatá industry, which plays such a great part in the Chaco, would be impossible; baskets would probably have to take the place of pouches; and the dwellings would certainly take on another appearance. All this is, of course, a physical necessity.

It is not, however, probable that an Indian tribe would willingly migrate to another district which should offer it quite strange natural resources. When the Incas or Quichuas extended their rule from Quito to the north of Argen-

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1) A shifting of this kind has taken place recently, some Tsirakua Indians from the Chaco Boreal having taken refuge in the primeval woods east of Sa.Cruz de la Sierra.

121 tina, they came to districts where they could live in about the same circumstances as at home. They also had settlements, however, at no great distance off, in the primeval woods near their own capital. They established themselves in the primeval forest valleys on the eastern slopes of the Andes, chiefly on account of the cultivation of coca, but they did not give up their permanent abodes in the mountains. They only visited the settlements in the primeval forests for sowing and gathering the harvest. In North Argentina, as in the mountainous districts of Ecuador, they found about the same essential conditions as in the neighbourhood of Cuzco. Had they penetrated into the primeval woods some fifty miles east of Cuzco, and settled there, they would have had to adapt themselves to entirely new conditions.

Of course a race clings to its old culture, and there is also much, of course, in the material culture of a race which need not fear a change because the race has been brought under other climatic conditions, has moved from a plain to the hills, from rainy woods to dry districts, and the like.

At times one can probably work out where a race has come from, because it has preserved some cultural elements from the old domain which are now of no practical use to it. Thus, when some of the Indians in the Chaco wear fur cloaks, this is probably due to conservatism: they wear a garment to which they had been accustomed in the colder climate of further south.

It is certain that the material culture of a tribe more easily undergoes important changes when it moves from one district into another with different climatic conditions than when it remains under the same external essential conditions. The changed conditions force the tribe to adapt itself to the new circumstances. If, in the new district the tribe comes in friendly contact with people who have adapted themselves to the local conditions, and who for generations have gathered experiences, it is natural that it should learn a great deal from them. Its material culture will then show a mixture of the old culture and the culture it meets with in the tribe of the new district.

Tribes of very different origin, which live together with an interchange of culture under the same natural conditions; generally get a homogeneous culture. Of such a nature, for instance, is that of the Pano and Tacana tribes in the border country of Peru and Bolivia. So also with the various tribes in the Chaco. On the upper Rio Xingú live the ~~Karaib~~ Carib, Arawak and Guarani tribes. They all have a similar civilization. The Chiriguano (Guarani) who have moved to their present locality, have now almost the same material culture as the Chané (Arawaks), who have been there a good while. On the other hand, their culture is very different from that of the Guarayú Indians, who migrated at about the same time as the Chiriguano, or early in the 16th century, from the neighbourhood of the Rio Paraguay, and who probably then possessed a culture similar to theirs.[1])

The neighbours of the Chiriguano towards the Chaco are the Guarani-fied Tapiete. These Indians, who are presumably more closely related to the Mataco group than to the Chiriguano, have adopted the language of the latter, but the bulk of their culture from the former[2]). This proves the posibility of two tribes with very dissimilar culture living together in friendly intercourse, without their culture assimilating.

The culture of a people can of course change, although the external essential conditions remain the same. But these changes take place very slowly under such circumstances, unless the tribe is exposed to influences from without, i. e. from other tribes. If it is a large tribe, the culture presumably changes quicker than if it is a small one. New ideas naturally arise more easily among a few hundred thousand

[1]) NORDENSKIÖLD (13).

[2]) NORDENSKIÖLD (7).

121 individuals than among small tribes of a few thousand or a few hundred members.

A great part can undoubtedly be played in the development of the culture of a tribe by rape, the women that have been raped being taken up in the tribe and exercising the same handicraft as before. When a great number of raped women of a highly developed tribe are taken up by a tribe of lower standing, their cultural influence is bound to be very great. It may be assumed that even in their new surroundings they cling to their old technical methods of weaving, making pottery, etc.

The rape of women is, and was, common above all other things among Indian tribes. The little tribes of the Atsahuaca and Tambopata-Guarayo, for instance, in the border country of Peru and Bolivia, still carry off each other's women. We know that, when the Chiriguano conquered their present locality, they abducted great numbers of women from tribes living there and in the vicinity. If we study the cultural influences that a tribe has received from a certain source, we must examine whether it is industries that are specially practised by women which produce this influence. In that case there is reason to conclude that the cultural influences have been brought about by abduction.

With regard to most of the cultural elements that the Indians have received from the white men, their origin is easily comprehensible. Thus, that all that has to do with the employant of horses, comes from the white races, goes without saying. On the other hand, with regard to certain cultural elements it is at times very hard to decide whether they are originally American or not. This is true of such a thing as the needle with an eye. Such needles were found in western America in pre-Columbian times, and from there they probably reached the Chaco. Yet the Indians of the Chaco may have learnt the use of the needle from the white men. Sewing-needles were already at an early time a favourite and oft-employed article of barter.

We must bear in mind that a race with a lower civilization is apt to imitate a more highly developed, or, let us say, a richer race, in clothes, adornments, etc. A tribe does not condescend to wear the adornments of more backward and poorer neighbouring tribes, but readily wears the ornaments and clothes of races more advanced and richer than themselves. Thus, the Chiriguano[1]) are fond of dressing like the white men, and the women bore their ear-lobes to be able to wear the earrings used by the white people. In this tribe it is characteristically the women of the younger generation, who have been more influenced by the white people that have bored ear-lobes, while the older women never wear ear-drops. On the other hand, the Chiriguano would never think of imitating the less civilized tribes in the Chaco.

In the same way presumably, the Indian tribes east of the Andes have imitated the Incas, or Indians on a like cultural level, with whom they have come in contact.

Throughout the Chaco it is in the first place the chieftains and the interpreters that dress like the whites. This is regarded as being smart. SÁNCHEZ LABRADOR[2]) relates characteristically of the Mbayá on the Rio Paraguay, that the chieftains and the medicine-men, but not the other Indians, wore shirts reaching to the feet, a garb that was universal in the Inca Kingdom. It was smart to be dressed like the more advanced Indians, for which reason they copied them and spread the new fashions. Sepp[3]) relates that among the Yaro (Chaná) on the lower Rio Uruguay the chieftains slept in hammocks, the others on skins spread on the ground. This, too, was certainly at the outset a matter of fashion.

A more cultured race exerts a certain attraction upon a lower one, as long as the latter is not exposed to interference from the former. The Tapiete (one of the minor

[1]) NINO, p. 108.

[2]) Vol. I. p. 284.

[3]) P. 51.

121 Chaco tribes) even apply for work to the more highly developed, fully domiciled Chiriguano, as at whiles the Mataco Indians apply to the Chané. The Incas and the tribes of N. Argentina belonging to the Bronze Age civilization, most certainly exercised a similar influence on the less civilized tribes with whom they had friendly relations.

For purposes of trade a higher tribe may of course visit a lower one. This can still be seen in the Chaco, where the Chané visit the Toba to exchange things for their dried fish. On such expeditions they are always amiable, we may suppose, and an exchange of commodities of this kind is very important for the spread of ideas.

When a cultural element has such a distribution that it occurs among a higher tribe and neighbouring lower tribes, and is otherwise lacking in extensive tracts I have assumed that as a rule it has reached the lower tribe from the higher. Thus, for example, if a cultural element occurs in the old cultural territory of the west of S. America, and is now found among a lower tribe in a territory adjoining that, we can assume in most cases that it came originally from the cultural part.

In the following pages, in speaking of the maps, I shall quote numerous examples of cultural elements with a distribution of that kind. Many of them occur only in the Chaco and within the cultural zone in western S. America. All the cultural elements with a distribution of this kind must have had a common origin, which cannot very well have been the Chaco, but must have been the cultural western zone.

What is true of the Bronze Age culture in relation to such tribes as the Choroti and Ashluslay, may be held to be true in general of the Guarani and Arawak tribes in relation to the first-named. It is the Choroti and Ashluslay that have borrowed some cultural elements from the more civilized Guarani and Arawak tribes, and not vice versa.

It has proved there that a great number of cultural elements have a westerly distribution, and evidently reached the Choroti and Ashluslay from the Bronze Age civilization in the west; a smaller number of cultural elements show a distribution which points to their having come from the north and east; others have a pronouncedly southern distribution; while others, again, only occur in the Chaco.

In the case of some cultural elements it has been impossible to draw up satisfactory maps, as they have been neglected by most investigators; some have such a distribution that it is impossible to decide from where the Choroti and Ashluslay got them.

Occasionally the higher races in the west seem to have taken over cultural elements from the tribes east of the Andes, but this does not seem to have been the general rule.

It is, of course, often difficult to decide whether a cultural element reached the lower tribes from the civilization of the mountains or whether it derived from a primitive civilization common to the mountains and to these tribes. We must attempt to decide this in each special case from the nature and distribution of the element. If, for instance, the Kelim technical skill, which is so characteristic of the cultural district in the west, occurs in the Chaco, but not in any other part of S. America east of the Andes, we have reason to assume that this cultural element is a loan made by the Chaco Indians from the mountain civilization. The same is true, for example, also of such cultural elements as shirts, certain curious whistles, etc. A cultural element such as the carrying net, for instance, which is characteristic of western S. America, but also occurs in the Chaco and among certain undeveloped tribes in Brazil, did not, probably, spread from the mountains to the tribes east of the Andes, but dates from a very old period and a common primitive civilization.

In the following I will speak first of the material culture of the Chaco tribes here dealt with, and state the ev-

121 idence which I have collected about the distribution of each several cultural element, and which forms, so to speak, the verification of the maps. I will then tabulate the cultural elements which seem to have a common origin.

III.

Dwelling-places.

The Chaco Indians here dealt with, the Choroti and the Ashluslay, live in round or longish, low, brush-wood huts, built of branches planted in the ground and covered with grass or twigs. The entrance is quite narrow and occasionally built out with a passage or porch as a shelter from the wind. This type of hut is well known from many books of travels describing the Chaco.[1] Besides these huts, one can see among these Indians four-cornered cooking-sheds[2], and among the Ashluslay some huts of a similar kind, which are used at carousals and to lodge strangers (men's houses).

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The Chaco hut makes a proverty-stricken show, and one is astonished that tribes which can produce among other things, beautifully ornamented textile fabrics and very pretty knitted work, should not have hit upon the idea of building better huts; even when these Indians work for the season in the Argentine sugar factories, they erect these primitive huts.

This type of hut has a very wide-spread distribution in the Chaco. Besides among the tribes mentioned, we find the same among the Mataco, the Tapiete and a few of the Toba Indians. Hunt[3] says characteristically of the huts of the

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[1] See, e. g. v. Rosen (1) Pl. 11, fig. 2, and Nordenskiöld (8 B.), fig. 2 and Pl. 3.

[2] Nordenskiöld (8B), fig. 6.

[3] p. 173.

000 Choroti Indians that they are well made, for he was accustomed to see still more primitive huts among the Lengua Indians, huts consisting of a couple of rush-mats fastened on poles. The Lengua take these mats with them when they move from one place to another. The Toba[1]) on the lower R. Pilcomayo have similar tents, and the Mbayá[2]) formerly had similar dwelling-places, as had the the Abipone[3]). The Chaná[4]) had houses very like those of the Choroti and Ashluslay Indians, though much larger and roomier. The Chiriguano and the Chané now have very roomy, four-cornered huts with ridges to the roofs. But this type of hut is not the original type; it certainly arose under the influence of the whites. In the 16th century the Chiriguano had huge huts in the shape of halls, more than 100 persons living in each hut, a few huts constituting a village.[5])

Outside the Chaco I have seen huts like those of the Choroti and Ashluslay only among the Cháma and the Tambopata-Guarayo but built of quite different material. The Yaghan and the Alikuluf in the extreme south of S. America have huts of the same structure as those of the Chaco Indians. We may assume that the Choroti and Ashluslay type of hut is a very old cultural element in America with a predominantly southern distribution at the present time. It is of interest that it is now used only around the upper R. Pilcomayo and the upper R. Bermejo, and chiefly by Indians belonging to the Mataco group, whereas the Toba, Mbayá, Abipone and Lengua tribes have, or had, portable huts, probably allied to the skin-tents of the Patagonians. I also deem it probable that the round or longish brushwood hut represents a

[1]) Ducci, p. 6.

[2]) Sánchez Labrador, Vol. I, p. 208.

[3]) Dobrizhoffer, Vol. 2, p. 119.

[4]) Sánchez Labrador Vol. 2, p. 275.

[5]) Annua de la Compañía de Jesús, Tucuman y Perú, 1596. Relaciones geográficas de Indias, Vol. 2. p. CIV: »cada casa, que es como iglesia de una nave grande.«

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more original, older type of hut in the Chaco that the portable tent. 000

The protecting porches are, as far as I know, not used by any other Indians in S. America than those here mentioned (the Choroti, Ashluslay and Mataco.)

Cooking-sheds of the type seen in the Chaco, I have not come across among any other Indian tribe visited by me.

In a few of the Ashluslay villages, several huts of the same construction as the cooking-sheds had been joined together to form an irregular building which served as a meeting-place for the men, and was also used as a guest-house. Elsewhere a large tree serves the same purpose. The custom of having a special building in which the men assemble, especially at drinking-bouts, is widely extended in S. America. On my journeys, however, save among the Ashluslay, I have only found this kind of men's house among the Chacobo Indians in N.E. Bolivia. A 344

IV.

The Bed.

A C 513

The Choroti and the Ashluslay have no hammocks or plank beds (catre). They sleep on the ground, on skins, or simply on the cloak they use as a garment. Hammocks are used by the neighbouring Chané and Chiriguano, as well as by the Guaná in the Chaco Boreal.[1]) But these are not practical for the Chaco Indians here dealt with, as they cannot sling them in their small, narrow huts[2]). Besides, it is too cold during part of the year in the Chaco to sleep in hammocks, for which reason the Chané and the Chiriguano seldom use them as beds, but chiefly for resting in during the daytime. That hammocks are not used in the hills, is probably also due to the climate, and not to unacquaintedness with these comfortable couches. The Ashluslay occasionally have mats of rushes, on which they sit or lie. I do not know where they derive from. I have 000 not seen mats of exactly the same kind except among the Chané. **Sánchez Labrador** mentions them as used by the Chaná[3]) and Mbayá (= Kadiuéo)[4]) and **Max Schmidt** by the

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[1]) Cominges, p. 236.

[2]) For the same reason the Chamá, too, have no hammocks. Among the Mataco-Vejos I saw a hammock which was used as a bed for young dogs to protect them from sand-fleas. The Tapiete have no hammocks but I saw a toy hammock among them (R. M. L. 32) These two tribes are therefore acquainted with hammocks, though the necessity for the manufacture of them does not exist.

[3]) Vol. 2, p. 276.

[4]) Vol. 1, p. 248.

Guató.[1]) We find skin mats among the Toba, Tapiete, Mataco, Chané, Chiriguano, Yaro-Chaná,[2]) some Guarani tribes in Paraguay[3]) Charrúa,[4]) Caingang in Rio Grande do Sul[5]) Angaité[6]) Payaguá[7]) Guató[8]) Araucanians[9]) Patagonians[10]), and Fuegians.[11]) JACINTO DE CARVAJAL speaks of them among the Indians on the R. Apure[12]) in Columbia, and it is to be presumed that skins are also used by some other Indian tribes for lying on. In a Mosetene fairy-tale that I noted down in Covendo, the jaguar is spoken of as having skin mats in his hut. The narrator evidently wished to emphasise how poorly the jaguar's hut was furnished. The Mosetene themselves have mats woven out of palm-leaves.

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I have counted the skin mats among the southerly cultural elements, although skins are also used in isolated cases as mats in other parts.

Seats, which are so widely used throughout the north of S. America, are not used by the Choroti and the Ashluslay.

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[1]) (3) p. 241.
[2]) SEPP p. 51.
[3]) Ibid. p. 54.
[4]) AZARA (1) Vol. 2. p. 12.
[5]) TESCHAUER p. 23.
[6]) COMINGES p. 122.
[7]) AZARA (2) p. 361, 10 (3) p. 179.
[8]) MAX SCHMIDT (3), p. 179.
[9]) MEDINA p. 173.
[10]) OUTES (3) p. 257.
[11]) GALLARDO
[12]) p. 204.

V.

Cultivated Plants and Agricultural Tools.

A C 241 The Choroti grow small quantities of Indian corn, manioc, zapallo[1]) water-melon, tobacco, cotton, beans,[2]) calabashes, and sweet potatoes. The tilling of the Ashluslay Indians is more considerable than that of the Choroti. Thus, I have seen among them large manioc plantations. The water-melon, which did not exist in America at the time of the Discovery, reached the Choroti and Ashluslay from the whites. The Choroti call it «santia», from the Spanish «sandía».

A C 174 Manioc and probably tobacco, too, must have reached the Chaco from the north or the east. Where the Choroti and Ashluslay got the other cultivated plants from, i. e. whether they obtained them from the Bronze Age culture of the west, or not, is a question I do not venture to decide. In all probability they are not very old in the Chaco, for the Choroti and the Ashluslay are but too evidently tribes which are predominantly gatherers of wild fruits and fishermen to have practised agriculture for a long period of time. The peaceful Arawaks must have been largely instrumental in spreading the knowledge of agriculture in the Chaco. AZARA[3]) writes of the Guaná[4]): «Rozan para sembrar tabaco, algodón, mandioca, batatas. . . de que viven y no de la caza ni pesca.»

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[1]) Cucurbita.

[2]) In several varieties.

[3]) (2) p. 381.

[4]) Chané.

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The agricultural tools of the Choroti and Ashluslay Indians, like those of all the S. American Indians, are very simple. They have sticks and spades, and the Ashluslay have also a kind of club with which they break up clods. Of these tools the stick has a very wide distribution throughout the S. American continent wherever the Indians have any civilization. It is certainly as old in the Chaco as agriculture itself. I cannot therefore say that the Chaco Indians have taken it from anywhere. The spade, on the other hand, is probably a cultural element that reached the Indians of the Chaco from the mountain civilization. This is clearly seen from its geographical distribution. (Map. I). The spade of the Chaco Indians is sometimes made of one piece, the blade being occasionally bound to the handle. Both blade and handle are always of wood, generally of lignum vitae (palo santo).

The spades made in one piece have the shape of a canoe paddle (Fig. 1) with a little handle at the top. The Chiriguano also have a handle to their spades. The spades that have been found in N. Argentina and on the coast of Peru, have as a rule very long blades, like the spades of the Chaco Indians, but no handle. That the Indians of the Chaco should have learnt the use of the spade from the whites, is not probable. Nor is it likelythat, as I have elsewhere assumed, the are copied from paddles[1]).

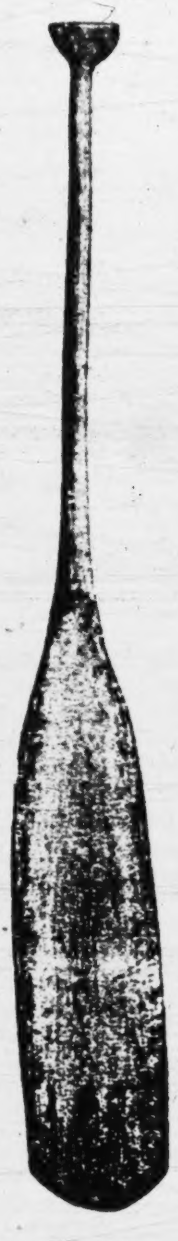

Fig. 1
Wooden spade.
Ashluslay, R. M.
(A .1816).

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[1]) I will return to this point, in consequence of Max Schmidt's recently published article in Z. f. E. 1918, p. 12. He shows that, besides among the tribes mentioned above, the spade occurs among the Kadiuéo, Bororó,

000 The spade which was used in pre-Columbian times within the western civilized zone, now occurs, as we have seen, among presentday Indians only in districts abutting on this civilized zone, and I have also mentioned that in this case it is probable that the cultural element in question originally derived from the civilized zone, and not from the little tribes in the frontier tracts.

The geographical distribution of the wooden spade

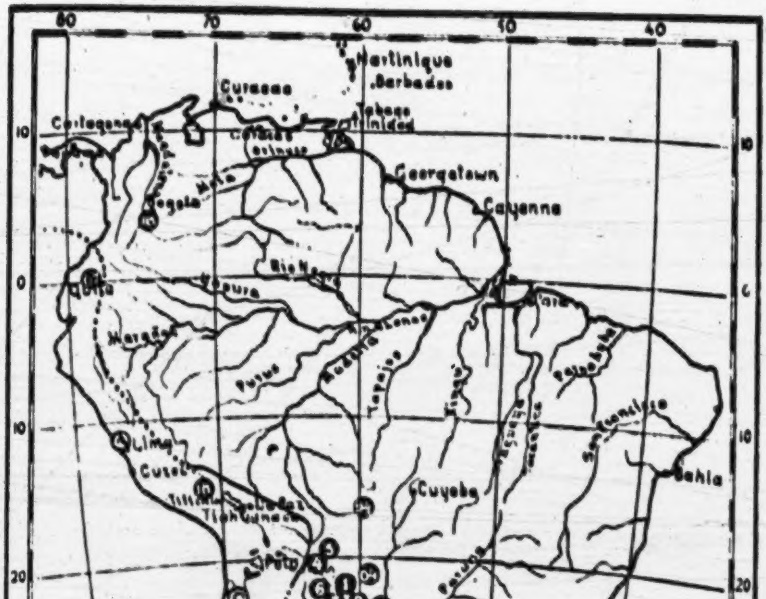
Map I)

No. on Map.	
A	Find from the coast of Peru, UHLE (4), p. 357. PUTNAM, Pl. 26, fig. 5.
C	» » Atacama, BOMAN, p. 731; UHLE (5), p. 109.
E	» » La Paya, Argentina, AMBROSETTI (5) Vol. 2, p. 456 with fig.
	» » Kipon, Argentina, DEBENEDETTI (1), fig. 8, 18 and 24.
18	Quichua, COBO, Vol. 4, p. 190.
10	Araucanians, MEDINA, p. 205; GUEVARA (1), p. 82.
95	Chibcha, RESTREPO, p. 121.
07	Cara, Ecuador, RIVET and VERNEAU (4) p. 16.
8	Lengua, GRUBB, p. 78.
04	Chaná, SÁNHEZ LABRADOR, Vol. 2, p. 291.
94	Chiquitos, BURGOS, p. 42.
4	Chiriguano, DEL CAMPANA (1) Pl. 8.
5	Chané[1]).
7	Toba.
6	Mataco
1	Choroti.
2	Ashluslay.

Chamacoco, Kaingua, Tereno and Tapiete. Some of the spades have quite a small blade.

[1]) When no author's name, and no reference is affixed to the tribal name it indicates that I rely on my own observations and collections. The last-named are kept at the Gothenburg Museum (G. M.) and the Royal Museum (R. M.) in Stockholm.

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6


Martinique
Barbados
Curacao
Tobago
Trinidad
Cartagena
Bogota
Meta
Orinoco
Georgetown
Cayenne
Rio Negro
Quito
Yapura
Amazonas
Marañon
Purus
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Xingu
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Map. I. Distribution of the Wooden Spade.

2: Nordenskiöld E-5 (1908-1909)1919

SK6 Choroti SK6

Ashluslay SK5

A 241 Clubs for breaking up clods are known to me, besides from the Ashluslay, only from the Aymara[1]).

The hoe with a haft bent at an angle, which is so typical of the mountain civilization, was not seen by me in the Chaco, or among the other tribes I visited east of the Andes.

A C 241 For removing the seeds from corn-cobs the Choroti and the Ashluslay use a little tool (Fig. 2) which I have only seen elsewhere among the Chiriguano and the Chané. From books I only know anything similar from the Ijca[2]) in Colombia.

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[1]) British Museum, Handbook, p. 280. These have stone heads, while those from the Ashluslay are entirely of wood.

[2]) Bolinder (4), p. 71.

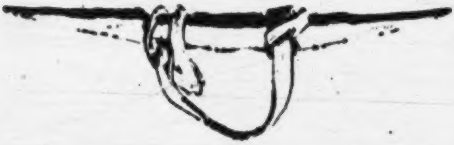

Fig. 2. Tool of wood and leather for removing the seeds from corn-cobs. Choroti. G. M. D. (1318) 1/4.

Ashluslay SK5

VI.

Tools used for collecting Wild Plants.

For bending down the high branches of the carob-tree (algarrobo) and other fruit-bearing trees, the Choroti and the Ashluslay use a long wooden hook. For digging out the prickly Caraguatá plant, they use a kind of long wooden fork (see »Indianerleben», fig. 49). The implement reproduced in Fig. 3 serves to tear up high grass. None of these implements have been observed, as far as I know, outside the Chaco. I have therefore counted them among the typical cultural elements of the Chaco Indians.

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Fig. 3. Tool of wood used for tearing up high grass. Choroti. G. M. (D 1111). 1/30.

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VII.

Hunting Weapons and Equipment.

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The Choroti are not eager huntsmen. The Ashluslay propably hunt more. Their only real hunting weapon is the bow and arrow. They also have snares of various sorts, though I do not know if they use them much. The sling and the bolas also occur among these Indians, but only as boys' weapons.

000
The *bow and arrow* are certainly very old cultural elements throughout S. America. We find them almost all over the continent and among all the really primitive peoples. As far as I know, this weapon is only wanting on the Upper Amazon, or at least was rare there, for in the oldest books of travels[1]) from these parts we are told that on the upper part of this river the Indians fought with spears which they flung with the throwing stick, whereas lower down the river they used the bow and arrow. In the mountainous regions and on the Peruvian coast, i. e. in the greater part of the cultural zone in the West, the bow and arrow was also a rare weapon[2]). One may really ask why the Indians there preferred to use the throwing stick rather than the bow, which latter was nowhere unknown to them. VEIGL gives us a good explanation[3]): «The throwing stick carries as far as a bow, and is much more convenient for them, as they can

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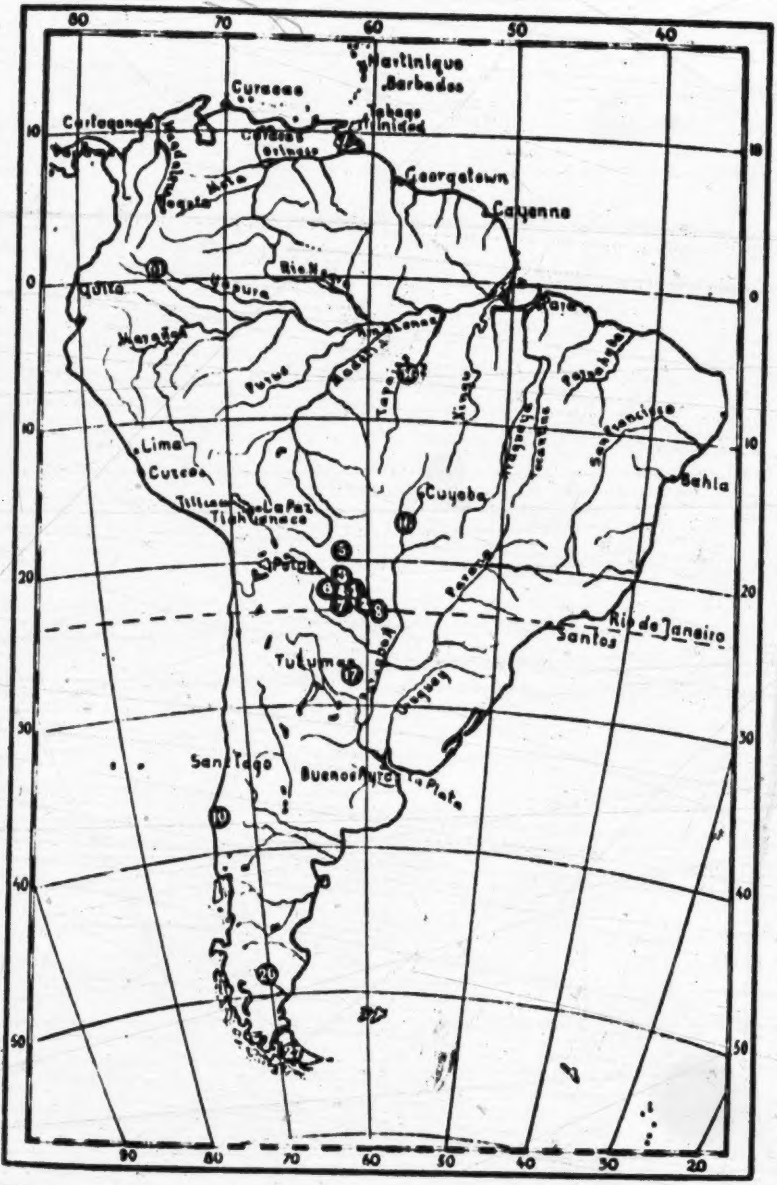
[1]) See GASPAR DE CARVAJAL and ACUÑA.

[2]) But was not unknown there.

[3]) P. 256.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Map. 2. The Distribution of the Bow-strings of animal material.

000 make the throw with the right hand alone, leaving the left free to steer or direct the boat.

In the mountainous districts and on the Peruvian coast it was in part no doubt the lack of wood suitable for making bows that made this a rare weapon, but also in part the advantage of having the left hand free while using the throwing stick.

A 224 411 The bow (Fig. 4) that is used by the Indians dealt with here, is very poor in comparison with the bows used by most of the Indians inhabiting N.E. Bolivia. The transverse section shows a very varying form. The two ends of the bow are sharpened to a point, and are not provided with notches to hold the string. Bows of this sort, without notches, seem to belong to a very old cultural phase in S. America, for we only find them in the extreme south, and among a small number of very primitive peoples in Bolivia and Brazil.

000 Pater Schmidt mentions the following tribes that have bows ending in a simple point without notches for the string: Botokudo, Bugre, Chamacoco, Sapuki, Mataco, Toba, Angaité, Payaguá, Mbayá (Kadiuéo), Siriono, Pampas Indians, Miraña, Yauaperi and Uašmiri[1])

A few tribes have very indistinct notches at the end of the bow.

To the tribes enumerated by Pater Schmidt I can add, on the basis of archaeological material, the Indians in the Puna de Jujuy in Argentina[2]).

A C 411 283 825 824 The bow-strings of the Choroti and Ashluslay Indians are made partly out of caraguatá fibres, partly out of strips of skin. Bowstrings of animal material are only found among the Indians in southern S. America as far north as the Chaco. (Map 2). In tropical S. America such bow-strings are unpractical and rare. Bow-strings of tendons or strips of skin

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[1] Pater Schmidt, p. 1033.

[2] Lehmann-Nitsche (1) Pl. 2, fig. 3; pl. 3, fig. 16.

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti
Ashluslay SK5

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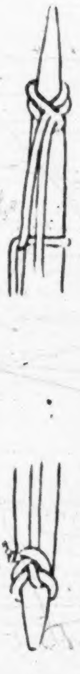

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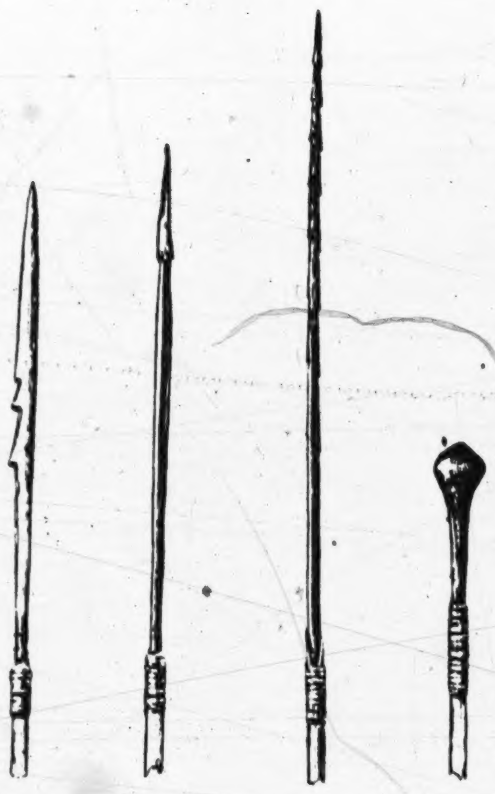

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5 b

5 c

5 d

Fig. 4. Bow. Ashluslay. R. M. (A. 1701) 1/4.

Fig. 5 a Arrow point Ashluslay G. M. (C. 428) 1/6
b » » G. M. (C. 417) 1/6
c » » G. M. (C. 429) 1/6
d » » G. M. (C. 423) 1/6

000 are, or were, used by the (27) Ona[1], (5), Chané[7] (2) Ashluslay[7], (1) Choroti[7], (6) Mataco[7], (7) Toba[7], (3) Tapiete, (10) Araucanians[2], (26) Patagonians[3], (17) Abipone[4], (16) Guató[5, 8] and (8) Lengua[9].

WHIFFEN mentions bow-strings of strips of skin from (61) tribes on the north bank of the Rio Yapurá[6]. MEYER assumes that a bow with tendon string, which has been preserved since the 17th century in Copenhagen, comes from (56) Mundrucú. I consider it probable that the string which is now on the bow did not originally belong to it[10].

For the rest, bow-strings of vegetable material are found throughout S. America.

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In fig. 5 a, b, c, and d are reproduced the most important of the types of arrow heads to be found among the Choroti and Ashluslay. Of these I have attempted to study the distribution of the arrows with thickened heads (the bird arrow) (fig. 5 d) and would refer to Map. 3 and the subjoined list of references concerning the distribution of these arrow-points. The map pays no regard to the shape of the points among the different tribes. 000

The Geographical Distribution of the Bird Arrows in S. America (Map. 3)

No. on the map.	
45	Botocudo, WIED, Vol. 2, p. 25; V. IHERING (2), Pl. 2, fig. 5; THERESE VON BAYERN (1), Pl. 4, fig. 8.
14	Bororó, STEINEN (3), p. 485.

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[1] GALLARDO, and others.

[2] MEDINA, p. 134.

[3] PIGAFETTA p. 12.

[4] DOBRIZHOFFER, Vol. 2, p. 354; »of the entrails of foxes».

[5] MAX SCHMIDT (3), p. 186.

[6] p. 95.

[7] Also of Caraguatá fibre.

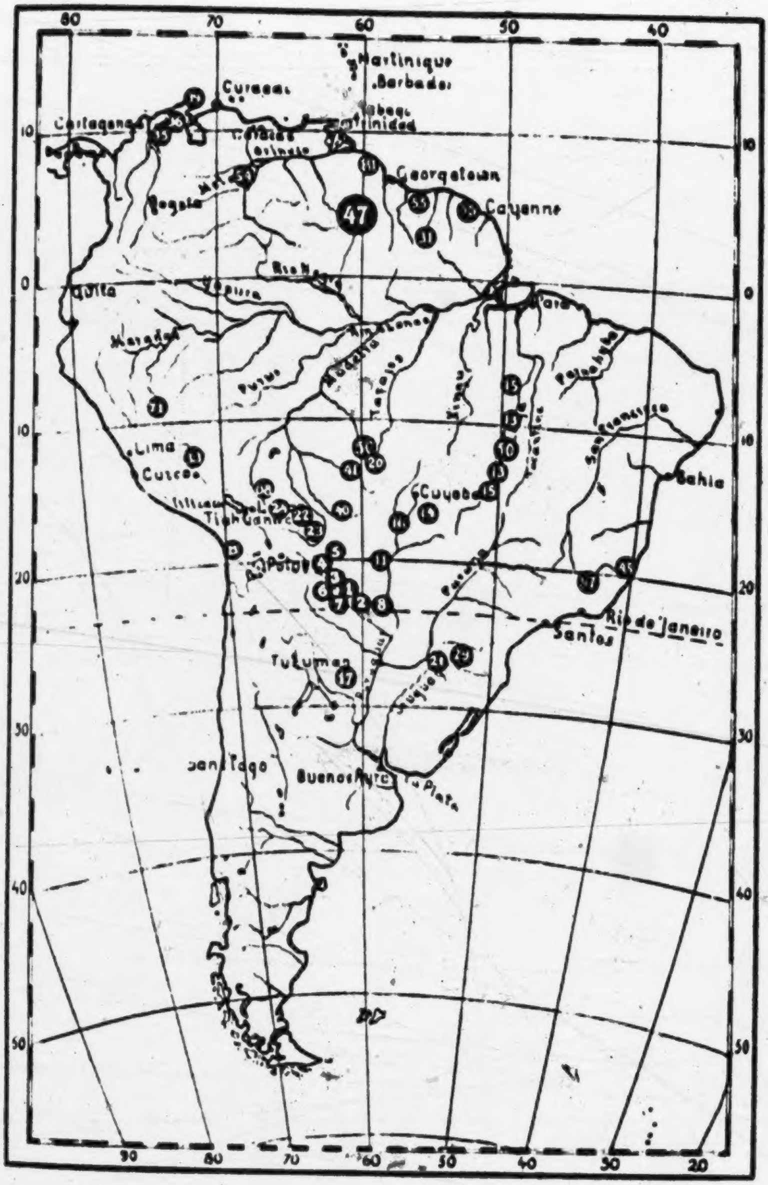
[8] Also of palm fibre.

[9] GRUBB, p. 77.

[10] Is it not possible that some little princes played with the bow, and having lost the original string had a new one fitted to it?

2: Nordenskiöld E-5 (1908-1909) 1919

SK6 Choroti SK6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Bahia
Titicaca
Tiahuanaco
Potosi
Rio de Janeiro
Santos
Tucuman
Uruguay
Santiago
Buenos Ayres
La Plata

Map. 3. Distribution of the «Bird Arrows» in S. America.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti SK6

08 Mosetene.
24 Chimane.
22 Yuracàré.
33 Campa, ORDINAIRE, p. 268.
71 Sipibo or Cashibo, M. f. V. S.
40 Guarayú, Guarayos.
20 Paressi-Kabiši, MAX SCHMIDT (4), p. 201, fig. 49. 7. 8, «The thicker part at the upper end, used for stunning birds, is made of the naturally thick root of the cane.»
50 Nambiquara, ROQUETTE-PINTO (2), p. 184.
15 Kayapó, KRAUSE, p. 392, fig. 249 a.
13 Karajá, EHRENREICH (2), Pl. 4.
50 Šavajé, KRAUSE, p. 360, fig. 195 c.
4 Chiriguano.
21 Cainguá, VOGT, p. 204.
3 Tapiete.
5 Chané.
6 Mataco.
1 Choroti.
2 Ashluslay.
8 Lengua, HAWTREY, p. 295.
11 Chamacoco, BOGGIANI (1), fig. 39.
16 Guató, MAX SCHMIDT (3) p. 188, 191, 194, fig. 50, 61-64.
23 Churápa, toy.
41 Guarayú (Pauserna), NORDENSKIÖLD (11), fig. 139.
55 Kalina, Goeje, (1), p. 43.
55 Galibi, BARRERE, p. 168, fig. 2.
31 Trio, GOEJE (2), Pl. 2, fig. 10.
47 Indian tribes, Roraima. G. M.
81 Indians on the Coast of Guayana; Arawaks and Caribs, IM THURN, p. 244, fig. 14.
39 Goajiro, THERESE VON BAYERN (2), Vol. 1, Pl. 3, fig. 8.
36 Ijca, BOLINDER (4), p. 91.
35 Chimila, BOLINDER (4), p. 93.
54 Guahibo, STRADELLI, p. 24.

7 Toba.
29 Caingáng, AMBROSETTI (1), fig. 5.
30 Guayaqui, KUNIKE pag. 158. (Not on the map.)
17 Abipone, DOBRIZHOFFER, Vol. 2., p. 359.
97 Puri, WIED, engravings and maps to Vol. 1. Pl. 12, fig. 4.
13 Finds from Arica, UHLE (1), Vol. 1, Pl. 25, fig. 24 and 25, JOYCE, Pl. 26,4.

Arrows with thickened heads are almost entirely wanting throughout the N.E. of Bolivia, N.W. Brazil[1]), among the Indians of R. Purús[2]), among the Jivaro[3]), the Ona[4]), and probably the Mojo[5]) Indians.

These arrows, therefore, do not occur in every district where they might have been used with advantage. But it may be asked whether arrows with thickened heads are not somewhat unnecessary among tribes that have blowguns. These arrows are used especially in shooting at birds in trees. If the arrow does not strike the bird, but the trunk of the tree, it does not stick there as a sharp arrow would, but falls down and can be used again. The blowgun, too, is chiefly used in shooting at birds and small mammals that are found in trees. The two seldom occur together among the same tribe. It seems to me impossible to say at present where the bird arrow originated. It is probably a very old cultural element. The most primitive, but not certainly the oldest form of this kind of arrow, is found among the Botocudo, Purí, Kayapó, Paressi-Kabiši, and in parts among the Guató, where the thickened end is made of the root of the cane which constitutes the shaft.

The Ashluslay wrap their left wrists round with a thick cord as a protection against the bow-string. The Choroti, Mataco and Ashluslay sometimes have broad leathern brace-

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[1]) KOCH-GRÜNBERG, WHIFFEN.
[2]) EHRENREICH.
[3]) RIVET (1).
[4]) GALLARDO, etc.
[5]) CASTILLO, p. 318.

2: Nordenskiöld E-5 (1908-1909)1919

SK6 Choroti SK6

Ashluslay SK5

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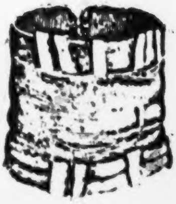

Fig. 6. Leather bracelet adorned with tin-plate. Ashluslay, R. M. (A. 1025) ¹/₂.

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lets (fig. 6), which probably serve the same purpose. *Wristlets* for shooting with the bow have not been observed among many of the S. American Indian tribes. From books I know of them among the Abipone¹), Botucudo²), Crichaná³), Goajiro⁴), Guató⁵), Ipurucotó⁶), Karajá⁷), Mbayá⁸), Mundrucú⁹), Chavantes¹⁰), Chicriabá (on the R. de S. Francisco, E. Brazil¹¹), Cainguá (Cayua)¹²) and Ona¹³).

The wristlet is, as far as I can see, a cultural element the distribution of which is too little known for us to venture upon conclusions with regard to its origin.

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Snares are probably extensively used in S. America, though they have been little studied. On my travels I came across a great number of snares set in very various ways by the Choroti, Chané, Toba, Cavina, Guarayú (Pauserna) and Tumupasa.

I will not attempt here to determine the distribution of the different types of snares. The fact is probably that all, or almost all, the Indian tribes use snares of some sort, though they may have escaped the notice of most travellers. When opportunity offers I will describe and depict, in a sep-

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¹) Dobrizhoffer, Vol. 2, p. 354

²) Wied, Vol. 2, p. 27

³) Barbosa Rodrigues, p. 161.

⁴) Therese v. Bayern (1) Vol. 1, Pl. 1, fig. 7.

⁵) Max Schmidt (3), p. 238.

⁶) Barbosa Rodrigues, p. 145.

⁷) Krause, p. 275.

⁸) Sánchez Labrador, Vol. 1, p. 316.

⁹) Martius, Vol. 1, p. 388.

¹⁰) » » » » 272.

¹¹) » » » » 278.

¹²) Lopes, p. 320.

¹³) Gallardo, p. 156.

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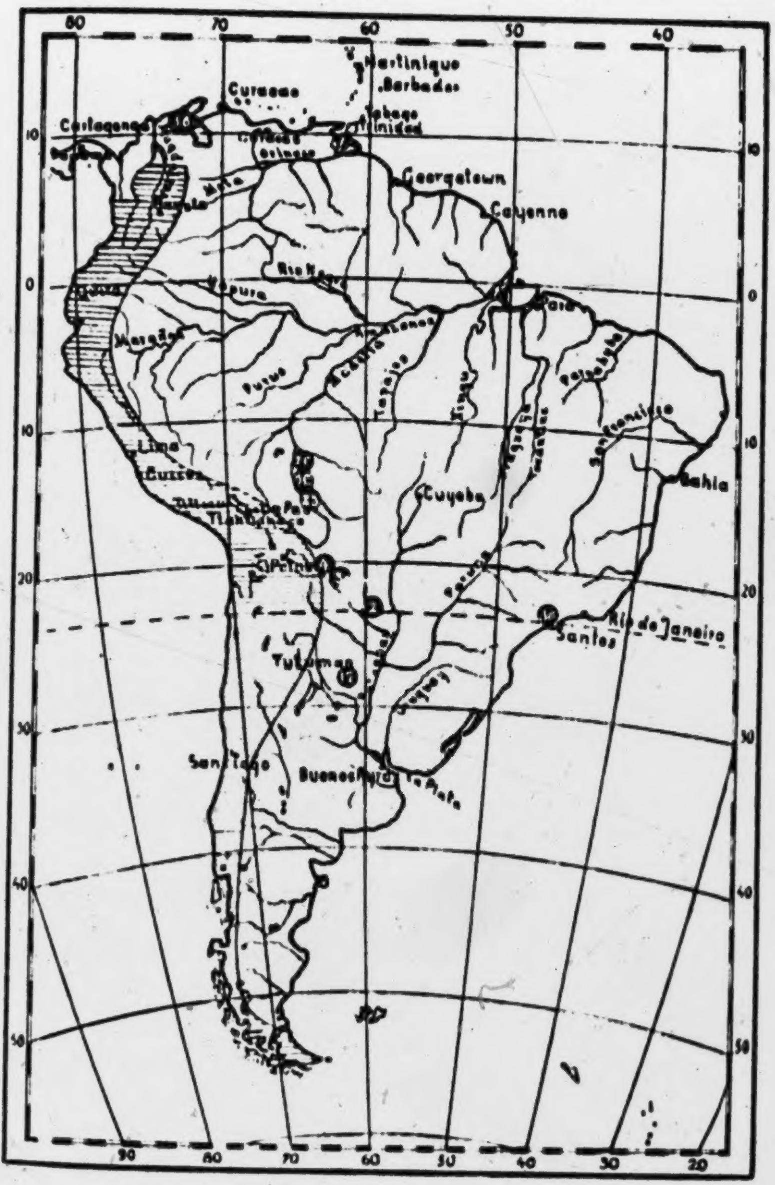
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Map. 4. The Distribution of the Sling.

ODD arate pamphlet, what I have seen in the way of snares and traps; it would be very desirable if other travellers would make a point of photographing and sketching the snares and traps used by different tribes. The primary material published on this head is very inconsiderable when compared with what is undoubtedly obtainable[1]).

411 524 The *sling* occurs among the Ashluslay Indians, but only as a toy. In their country there are extensive plains, where the sling would be easy to handle, but there are no stones available, and all that could be used in their place are lumps of clay and fruits. In these circumstances the sling could not serve as an implement of the chase or as a weapon.

ODD FRIEDERICI[2]) gives a resumé of the distribution of the sling in S. America. He gives

Caucatal, Highlands of Bogota, Inca Realm, Araucans, Pehuenche, Yaghan, (38) S.-Tupi and (25) Mojo.

Pater SCHMIDT[3]) also gives all the Fuegian tribes and the (7) Abipone.

To this list I can add, besides the Ashluslay, the (6 c) Canichana, (7 c) Itomana, (3) Tapiete, Chiriguano, (4) Quimbaya[4]) Panches[5]) and (36) Ijca[6]). Of these tribes the Canichana and Itomana probably did not learn to use the sling until post-Columbian times.

The chief area of distribution for the sling in S. America is the old cultural zone in the west. But it must be a very old cultural element, as it has extended to the Fuegian tribes.

411 The slings of the Ashluslay are cleverly made of a single cord, of which, as can be seen from Fig. 7, both pocket and

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[1]) I am probably right in claiming that I have a larger collection of Indian snares from S. America in the Gothenburg Museum than can be shown in any other European museum.

[2]) (2).

[3]) p. 1052.

[4]) SELER 1), p. 243.

[5]) OVIEDO Y VALDÉS, Vol. 2. p. 367 and p. 392.

[6]) BOLINDER (4), p. 94.

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6
Ashluslay SK5

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arms are made. I have not seen similar slings among any other tribe.

The *Bolas*, too, is only found among the Choroti and the Ashluslay as a toy or as a boy's weapon. There are no stones to make the balls, so these are made of wood.[1]) FRIEDERICI[2]) has indicated the distribution of the bolas. He mentions the Aymara, Quichua, Mojo, Mataco, Abipone[3]) and other Chaco Indians, the Araucanians and other allied tribes, the Indians of the Argentine pampas, the Patagonians and some of the Fuegians[4]). To this list may be added the Querandi[5]) at the mouth of the R. La Plata.

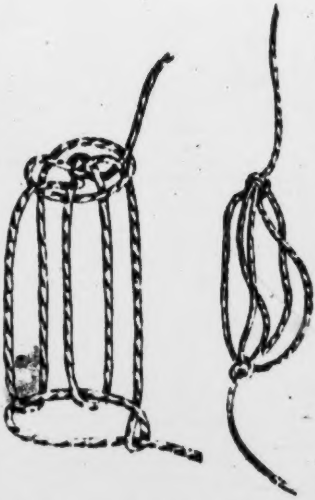

Fig. 7. Ashluslay Sling. R. M. (A. 1555).

Stones similar to those used for the bolas have been found in an extensive region in the west and south of S. America. A good deal that has been written about these stones is passed over by FRIEDERICI in the treatise just referred to; V. IHERING[6]) has written about these stones in S. Brazil. RIVET[7]) who offers us a very complete résumé concerning their distribution, is of the opinion that they were used in different places for different purposes. It must therefore not be assumed that wherever bolas-like stones have been found, the bolas was in use. EDER[8]) mentions the bolas of the Mojo Indians. It probably reached them at the same time as cattle-breeding, the horse, and the lasso, i. e. in post-Columbian times. According to him, the cords of the bolas were made of ox sinews, and the balls of lead. Stones that could have been used for bolas were not found by me in Mojos during my archaelogical excavations. In this very stoneless country, it would have been necessary to import stones for the bolas, if the bolas really was used as a weapon in pre-Columbian times. Bolas with wooden balls may have been used as toys, as they were in the equally stoneless Chaco, but on this point we know nothing.

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[1]) See »Indianerleben» fig. 24.
[2]) (4) p. 34.
[3]) Also as a toy. FRIEDERICI (4), p. 34.
[4]) See also COIAZZI. p. 124.
[5]) SCHMIDEL, p. 150.
[6]) (1), p. 73.
[7]) (4) p. 177.
[8]) p. 290.

Knowing the bolas to have been a very old weapon in the Andes and in the pampas, we may assume that most of the bolas-like stones which have been found there, were really used in bolas. From this we can judge that the bolas was used in the old territory of the entire Inca Kingdom, in S. Chile, Patagonia, the pampas of the Argentines, Uruguay, S. Brazil and Mojos, in which last locality it was in use at the time of the mission, but probably not earlier, nor yet now.

With regard to the bolas-like stones mentioned by Barbosa Rodrigues[1]) from the lower part of the R. Amazon on the R. Yatapú and from the Sierra Piquiatuba on the R. Tapajos, and with regard to those found in the Antilles (Guadeloupe), there is nothing to be said, as far as I can see, as to whether they were used for bolas or some other purpose.

Apart from the toys to which I have referred, I have found bolas only in the Puna de Jujuy among the Spanish-speaking Indians. The Chiriguano state that they formerly had bolas.

The Bolas presumably belongs to the very old cultural elements that have a marked westerly and southerly distribution. Like the sling, it was used in open country. In the

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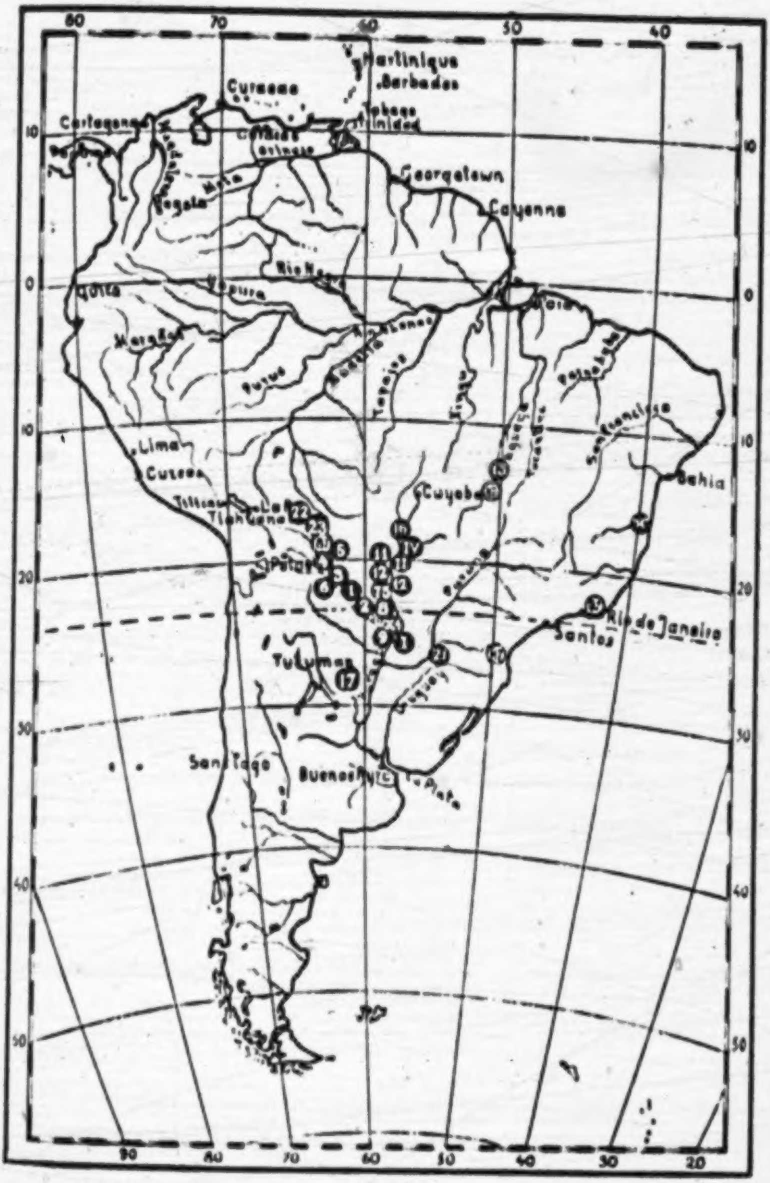
[1]) Following Rivet and Verneau (4), p. 178

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6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Map. 5. Distribution of the Clay-pellet bow.

woods the bolas is an unserviceable weapon. Toy bolas, like those used by the Choroti and Ashluslay, have not been observed by me among any other tribe. From books I only know of toy bolas from the Patagonians[1]), Araucanians[2]) and among the Incas, as stated by FRIEDERICI[3]) following HUAMAN POMA.

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A combination of sling and bow is the *clay-pellet bow* (Fig. 8). I have seen it among the (16) Mataco (Mataco-Vejos), (2) Ashluslay, (1), Choroti, (3) Tapiete, (22) Yuracáre, (4) Chiriguano, (5) Chané (23) Churápa, and (87) Mestizos of Sta. Cruz in Bolivia.

GUSTAF ANTZE has written a treatise on the distribution of the pellet bow in the world. According to him, it is in use in the following districts and among the following tribes of S. America: (87) Brazilian coast, W. of Cabo Frio, (87) Sta. Catarina, (3 c) Machali on the R. Belmonte (21) Cainguá (16) Guató, (17) Abipone, (8) Lengua (I), Guarani (Paraguay) (IV) Guaná (11) Chamacoco, (X) 4 Payaguá (II) Tereno (9) Toba, (12) Mbayá (Kadiuéo) (75) Angaité (87) among Portugese boys in Leopoldina, and among the (13) Karajá.

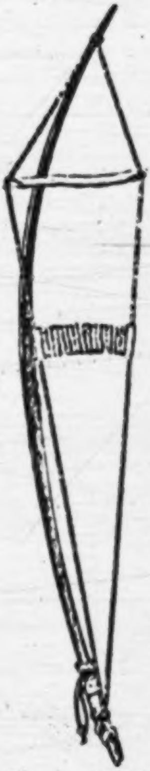
Fig. 8. Pellet bow. Ashluslay. G M. (A. 1798) 1/4.

As seen from Map 5, the pellet bow has an easterly and much concentrated distribution in S. America. It also occurs in India and E. Asia. It appears to me improbable that the pellet bow should have been invented independently in Asia and in S. America, and I almost came to the conclusion some time ago that the pellet bow reached the New World from the Old in some manner in pre-Columbian times, together with some other cultural elements ooo with a similar distribution. *A circumstance that also speaks in favour of the Asiatic origin of the pellet bow in S. America, is that strengthening in the middle of the bow (see fig. 9 a), which is to be found in the Asiatic bow, may also be seen in most of the S. American ones.* A similar strengthening is never seen in the S. American arrow-bow, whereas it is quite common in the Asiatic.

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[1]) OUTES and BRUCH p. 123.
[2]) FRIEDERICI (4), p. 34.
[3]) " "

I no longer believe in the pre-Columbian transference of the pellet bow from Asia to S. America, but still I consider it highly probable that the pellet bow reached S. America from Asia — *in post-Columbian times.* It was presumbably brought to the Brazilian coast from India through the agency of the Portuguese. And it is the Indian pellet bows that are most like the S. American ones. Another factor that speaks in favour of the pellet bow having reached S. America in post-Columbian times, is that this undoubtedly curious weapon finds no mention in any book of travels before Dobrizhoffer's (1784), despite the fact that we possess excellent old travel books about the very districts where the pellet bow is now used, as well as about the Brazilian litoral, in which books the weapons, implements, etc. peculiar to the Indians are dealt with[1]). In the Brazilian litoral the pellet bow was

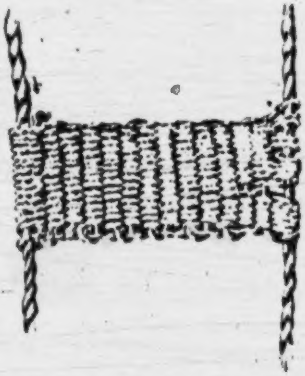

Fig. 8 b. Rest for pellet bow. Ashluslay. G. M. (A. 1436) 1/4.

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[1]) The only reference I have found in books of the 16th and 17th century which could be meant for the pellet bow, is the following passage in Gómara, p. 200, touching the Indians of Cumaná in Venezuela: «Aprenden de niños, hombres y mujeres, á tirar al blanco con bodoques de tierra, madera y cera.» But I am inclined to think that the reference is to pellets of earth, wood and wax thrown by hand.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti SK6
Ashluslay SK5

evidently used principally by mestizos and civilized Indians.

Around Sta. Cruz in Bolivia the pellet bow is a favourite toy of mestizo children. **Krause**[1]) mentions the pellet bow of the Brazilians in Leopoldina on the R. Araguaya, and emphasizes that the Karajá Indians learnt its use from them. He writes:

> «Den Kugelbogen (bodóke) habe ich bei den Karajá nicht gesehen. Doch wurde mir bei der Südhorde mitgeteilt, dass sie ihn anzufertigen verständen, und dass die Kinder Steine damit zum Töten kleiner Vögel würfen. Wahrscheinlich haben die Indianer ihn von den Brazilianern übernommen, da Kinder in Leopoldina ihn vielfach als Spielgerät benutzen. Das Fehlen eines einheimischen Wortes für das Instrument lässt wenigstens schliessen, dass auch das Gerät nicht einheimisch ist.»

Both the Choroti and the Ashluslay have a special word for the pellet bow, but then as a rule they have some special word for an article they have got from the whites. The Choroti call the pellet bow «lúsumpä», the Asluslay call it

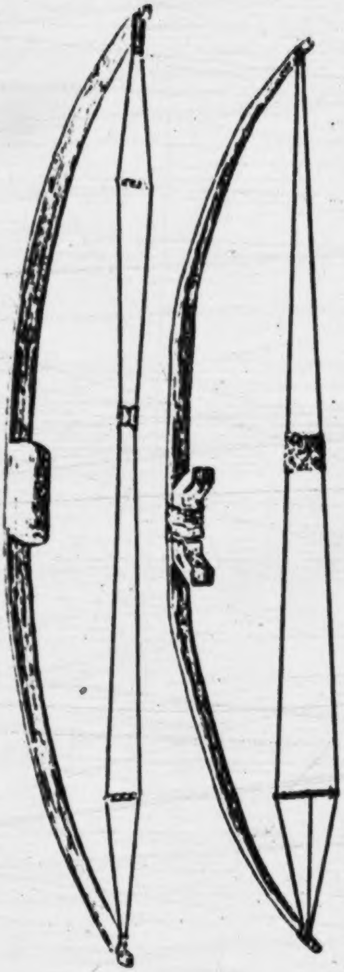
9 b. 9 a.

Fig. 9 a. Pellet bow from Travancore, India; 9 b. from Brazil. After Antze.

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[1]) p. 274.

«nok». In all probability neither the Choroti nor the Ashluslay received the pellet bow directly from the whites, but through the agency of some other tribe.

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It is also of interest to note, that the distribution of the pellet bow in S. America is quite different from that of all the other cultural elements. This also argues in favour of the pellet bow not being an Indian cultural element in S. America.

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In view of the above, I hold it best, for the present, to place the pellet bow among those cultural elements that the Indians of S. America received from the whites. This may seem rather bold, but, as stated above, there is much evidence in favour of this assumption. It proves how important it is to know the post-Columbian history of the cultural elements.

Ashluslay SK5

VIII.

Weapons not used, or seldom used, in the Chase.

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The bow and arrow is the most important weapon used by the Chaco Indians here dealt with in their encounters with other Indians or with white men. I have treated of the bow and arrow above. Particular types of arrows that are only used in encounters with men, are not found, with the exception of the *fire-arrow*. The Mataco, and probably also the Choroti when they attack an Indian village, occasionally employ such arrows. With them they set fire to their adversaries' huts. Similar arrows are mentioned by Dobrizhoffer[1]) from the Abipone, Staden[2]) from the Tupinambá, Martius[3]) from the Chavantes, Schmidel[4]) from the Indians at the estuary of the La Plata, Biet[5]) from Indians that lived near the estuary of the Oyapock in Guayna, Du Tertre[6]) from the Lesser Antilles, and Pizarro[7]) from Cuzco. Other weapons, not used, or seldom used in the chase, but principally in contests with men, are clubs, knuckle-dusters, lances and bone daggers.

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The *battle-club* has a characteristic shape among the Choroti and Ashluslay. It is short with, a clearly marked head.

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[1]) p. 359.

[2]) Vol. 1 Caput liij; Vol. 2, Caput xxvij.

[3]) p. 270.

[4]) p. 155.

[5]) p. 210.

[6]) Vol. 2, p. 404.

[7]) p. 200.

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PATER SCHMIDT[1]) mentions such clubs from the Tsirakua[2]) Ashluslay, Choroti, Sanapana, Chamacoco, Pilaga, Payaguá Mataco, Lengua, Mascoi, Guaná, and from the old culture zone in the West.[3]) I may add the Tupinambá[4]) and the Tapiete. PATER SCHMIDT points out[5]) that the occurrence of this type of club in the Chaco points to influences from the mountain culture. Here he is probably right.

It is of great interest to note the distribution of wooden clubs with clearly marked heads, and of clubs with stone heads. In S. Brazil, as in the Andes, we find stone clubheads. In the Chaco they are exclusively of wood, the very natural reason being that there are no stones. The occurrence of stone clubheads in S. Brazil will be the more readily understood on the assumption that the wooden club in the Chaco is a local form of the stone-headed Andes club.

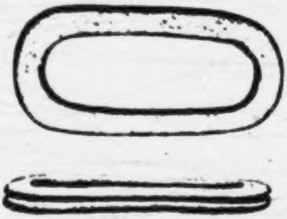

Fig. 10. Knuckle-duster. Mataco. R. M. (03. 3. 674) ½.

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A rare weapon in S. America, which is found in the Chaco among the (1) Choroti, (6) Mataco, (3) Tapiete and (2) Ashluslay, is the knuckle-duster (Map 5)[a]. It is used there by the women. Most knuckle-dusters in the Chaco are made of wood or Tapir hide. The knuckle-duster depicted above, which is of wood, is from the Mataco (Fig. 10). A drawing of a knuckle-duster of tapir hide from the Ashluslay is given in »Indianerleben».[6]) From the distribution of the knuckle-

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[1]) p. 1027.

[2]) Incorrectly quoted from my book, »Indianerleben», SCHMIDT substituting Sirionó for Tsirakua. The little missile clubs of the last-named Indians are, moreover, very different from those of the other Chaco Indians. (See »Indianerleben» fig. 140).

[3]) p. 1052.

[4]) LERY, Fig. p. 241.

[5]) p. 1027.

[6]) Fig. 37.

[a] [i.e., Map 6. -Analyst]

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti SK6
Ashluslay SK5

ODD duster we may conclude that it is one of the cultural elements that the Chaco Indians have received from the mountain culture. I have in my private collection a beautiful bronze knuckle-duster which, on somewhat uncertain authority, is said to have been found in the district of Lima (A). In the Museum of Ethnology at Berlin there is a wooden knuckle-duster found on the coast of N. Chile (B). LEHMANN-NITSCHE[1]) gives a drawing of an object from an old grave in the Puna de Jujuy (D) which appears to me to be a knuckle-duster of this kind.

Throughout the N.W. Argentine (E) numerous bronze knuckle-dusters have been found[2]). LATCHAM[3]) gives drawings of some from Sta. Maria (z) in N. Chile. BOMAN[4]) also mentions a knuckle-duster, found near Taltal (z) in Chile. The same author gives particulars of a knuckle-duster found at San Juan (F) in the Argentine. This, like those found in Chile, is of bronze. COBO[5]) and ACOSTA[6]) instance knuckle-dusters from the Incas (18), used in certain religious ceremonies.

The distribution of the knuckle-duster is, as we see, very similar to that of the spade, though less extended.

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The *bone-dagger*, too, is a rare weapon in S. America. We find it in the Chaco among the Choroti and Ashluslay. Besides this, it is only known from the Bororó[7]), from the district of Chuquimayo in N. Peru[8]) and from the extreme S. of Chile[9]). I have counted the bone dagger among the

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[1]) Pl. 3, fig. 38.

[2]) BOMAN, p. 136, LAFONE QUEVEDO (2), p. 285. AMBROSETTI (3), p. 250.

[3]) (2) p. 44, fig. 7—8.

[4]) p. 136.

[5]) Vol. 4. p. 86.

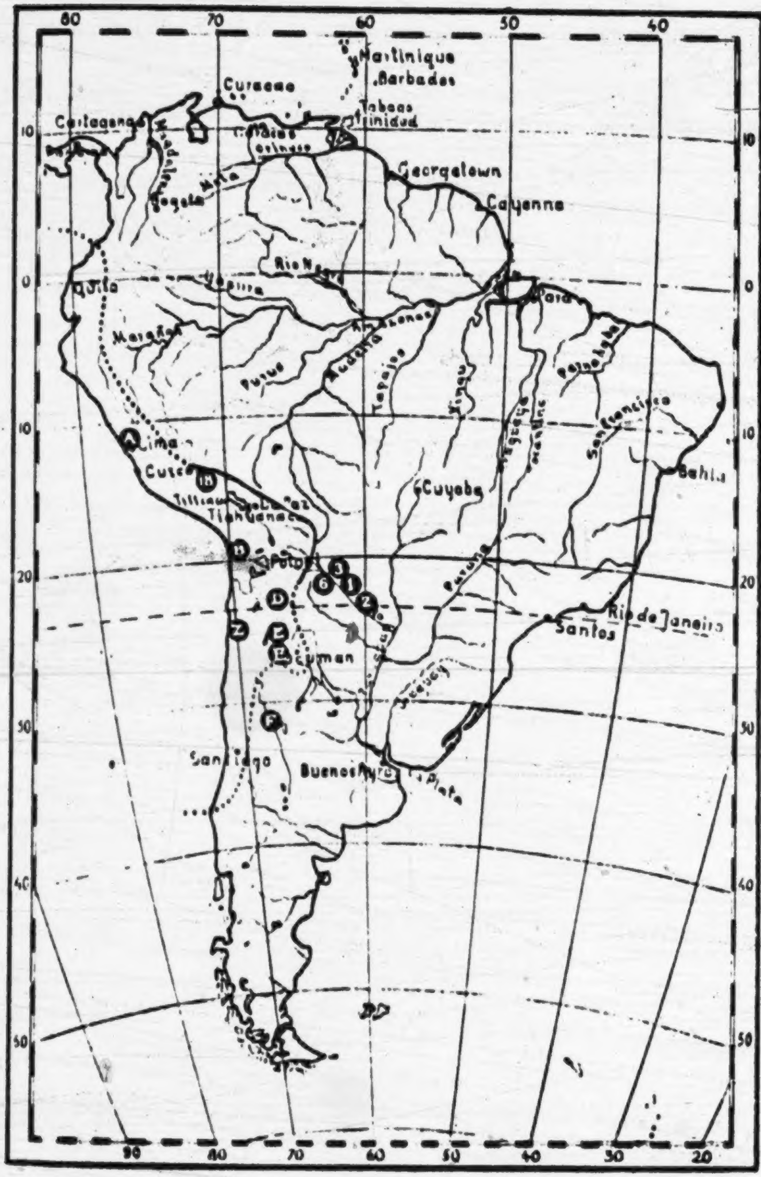
[6]) Lib. V. Cap. IV.

[7]) FRIČ a. RADIN Pl. 30, fig. 13.

[8]) PALOMINO, p. LI.

[9]) MEDINA, p. 138.

ODD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Cayenne
Rio Negro
Quito
Yapura
Para
Marañon
Amazonas
Purus
Madeira
Tapajos
Xingu
Araguaya
Tocantins
Parnahyba
San Francisco
Bahia
Lima
Cuzco
Titicaca
La Paz
Tiahuanaco
Potosi
Cuyaba
Parana
Rio de Janeiro
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Map. 6. The Distribution of the Knuckle-duster.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti SK6
Ashluslay SK5

000 cultural elements the distribution of which is not exactly known.

The *lance* likewise belongs to the weapons seldom used in the chase, but chiefly in combat with other men. However, I have seen the Mataco use lances in hunting the A peccary. The Ashluslay also have lances, provided, like those of the Mataco Indians, with iron heads, which the Indians [411 obtain from the whites by barter. Besides among the two 439] tribes here mentioned, I have seen lances among the Toba alone. The lance has, or more correctly had, a very extensive distribution in S. America. It is certainly very difficult to decide which tribes have learnt the use of the lance from the whites[1]) so that I do not venture to express an opinion as to where this cultural element is to be placed. As early a writer as SCHMIDEL[2]) says of the Timbú Indians: »En esta ocasion ellos se habian fabricado lanzas largo con las espadas como se habian aprendido á los Cristianos.»

Neither of the Chaco tribes here dealt with possess A shields. On the other hand, the Ashluslay occasionally have C *body armour* of cow hide and jackets of jaguar hide, which [713] serve as a protection against arrows.[3]) DOBRIZHOFFER mentions similar jackets of tapir and jaguar hide from the Apipone[4]). The Patagonians, too, according to FALKNER[5]) and the Araucanians, according to VALDIVIA[1], used hide armour. 600 The Incas probably had no leather armour, but only armour of other material, such as wadding, and little slats[2]. Nor is any armour mentioned in the earliest descriptions of La Plata and Chaco, so that I do not hold it to be impossible that the leather armour was an imitation in many parts of the armour of the Spaniards. Both leather armour and lance belong to the cultural elements of which at present no use can be made in determining the migration of nations, as their post-Columbian history is unknown.

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[1]) An exhaustive historical enquiry would be necessary, and this would be difficult, if not impossible, to carry out.

[2]) p. 192.

[3]) »Indianerleben», Pl. 14.

[4]) »The Abipones are unacquainted with shields and target, but they cover the greater part of their bodies with a sort of defence, made of an undressed antas hide, a tiger's skin being sewed either in the in- or outside; it is open in the middle, that the head may come through, and extended on each side as far as the elbows and middle; it is impenetrable to common arrows but not to spears and bullets, though it somewhat diminishes their force. To this coat of mail they added a girth wider than a man's hand, of the dressed hide of the same animal, when they saw their leader Debayakin wounded in the belly with a spear.» Vol. 2. p. 361.

[5]) p. 112.

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[1] p. 52.

[2] Cobo, Vol. 4, p. 194.

IX.

Fishing-tackle.

A The tackle used by the Choroti and Ashluslay is of two C kinds of nets, as well as the bow and arrow[1]) The Ashluslay have also a species of basket which they place over the fish 227 they catch in swamps. As far as I know, catching fish by means of poison is not in vogue. Angling hooks of Indian manufacture I have not come across, and European hooks are not popular as objects of barter among the Choroti and Ashluslay. To net fishing belong clubs, with which the fish are killed, and wooden needles with line of the same material to draw up the captured fish. The *nets*[2]) used by the Choroti and Ashluslay I have seen employed by the Chiriguano, Chané, Toba and Tapiete, but by no other 000 tribes that I got to know on my travels. Nets like the dip net are known to me from books, but only among the Lengua[3]) and from the N.W. of Brazil.[4]) I therefore count the net among the cultural elements with whose distribution I am imperfectly acquainted. Small, short *clubs*, only used in killing fish, were seen by me among the Mataco, the

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[1]) In my book »Indianerleben» I wrote that the Choroti and Ashluslay do not employ the bow and arrow for killing fish. This is incorrect, as Mr CARL MOBERG informs me. They employ this method of fishing during the latter part of the rainy season, when I was not among these Indians.

[2]) See »Indianerleben» fig. 11 a, Pl. 14 and fig. 73.

[3]) GRUBB, p. 81.

[4]) KOCH-GRÜNBERG (2) Vol. 2, fig. 11.

Ashluslay SK5

Toba and the Tapiete, as well as among the tribes mentioned above. **MAX SCHMIDT**[1]) mentions these clubs from the Guató. Formerly they were also used by the Mbayá[2]). I have put the club among the cultural elements characteristic of the Chaco. The *wooden needle with the line* for pulling up fish is also specially characteristic of the Chaco. Apart from the tribes here dealt with, I have seen such needles among the Toba, Mataco and Chiriguano. **HAWTREY** also mentions them from the Lengua.[3]) I have not seen them mentioned in books about any tribe outside the Chaco.

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The *baskets* mentioned above are also found, besides among the Ashluslay, among the Lengua[4]) and the Cayubaba[5]). I have seen them myself among the last-named tribe.

I have myself seen *fishing with the bow and arrow* and know it to be practised among the following tribes: Atsahuaca, Chacobo, Cháma, Chimáne, Chiriguano, Churápa, Guarayú (in the Mission), Guarayú (Pauserna) Huanyam, Huari, Mosetene, Tambopata-Guarayo, Yamiaca and Yuracáre.

This sort of fishing is widely extended in S. America.

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The Choroti and Ashluslay have no multi-pointed fishing arrows, and no harpoon arrows.

There is a curious *river damming contrivance* in use among the Choroti, Ashluslay and Mataco during the dry season, which I have not seen elsewhere, and which I have not found mentioned in the books I have consulted. I have described it in «Indianerleben»[6]) so that it seems unnecessary to repeat it here.

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[1]) p. 211.

[2]) SÁNCHEZ LABRADOR, Vol. 1, p. 223.

[3]) p. 287.

[4]) GRUBB, p. 81 and fig. p. 241.

[5]) KELLER-LEUZINGER, p. 72; see also NORDENSKIÖLD (o) fig. 59.

[6]) p. 48.

X.

Domestic Animals and Objects connected with them.

A C 231 The Choroti and the Ashluslay keep dogs, horses, cows, sheep, goats, fowls and cats. Of these the *dog* is the only native domestic animal. The dog is very widely distributed in America. In many cases it is difficult to decide to what extent he has spread beyond his original domain in post-Columbian times. I do not know whether the Chaco dog has been crossed with dogs of European breeds, but in any case he has a very characteristic appearance, and is worth studying by a specialist.

We know that the Indians of the Argentine pampas and of the Chaco Austral became real equestrians soon after the Discovery of America. Their whole life was changed and adopted to the horse.

A C [481 492] The Ashluslay and some of the Choroti also have horses, and *breed horses*. But they are not equestrians, and usually go on foot. Owing to the introduction of horses, they have adopted this and the other accessory to a horseman's equipment, among other things, curious *spurs* of forked wood. (Fig. 11).

The Ashluslay Indians have numerous cows and sheep, and a smaller number of goats. Among the Choroti we find sheep and goats, and few cows. When the cows are killed, their flesh is used; but this may be said to happen rarely.

2: Nordenskiöld E-5 (1908-1909) 1919

SK6 Choroti SK6

Ashluslay SK5

A C 231 237 286 321

The wool of the sheep is turned to account. Sheep and goats are sometimes killed.

Cow horns are used as tinder-boxes, spoons and occasionally trumpets.

Little enclosures are sometimes built for the sheep and goats.

Goat horns are also turned into spoons.

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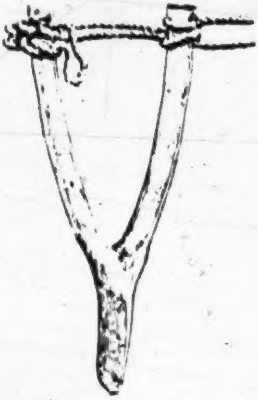

Fig. 11. Wooden Spur.
Ashluslay. G. M. (A. 197) $^1/_2$.

XI.

Tools.

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In the interior of the Chaco there are, as we have already pointed out, no stones at all. Consequently the Ashluslay and the Choroti have no stone tools, their primitive tools being made exclusively of bone, teeth, shells, and hard wood.

As knives they use the sharp-toothed *jaw of the palometa* (round pompano). These knives are used by the Indians of S. America whereever these fish occur, and where the Indians still use primitive tools. Thus, KARL V. D. STEINEN mentions them for the Indians of the upper R. Xingú.

Bone awls are in general use among the Ashluslay and the Choroti, though rather as bleeding instruments than as tools. The bone awl belongs to the objects whose distribution is very difficult to study, as it soon goes out of use when the Indians have obtained iron from the whites. I have seen it, apart from among the above tribes, among the Yuracáre, Chiriguano, Tapiete, Mataco and Toba. A special kind of bone awl is used by the Choroti and the Ashluslay for removing sand fleas (chigoes). I have not seen them elsewhere. [757]

Pieces of shell are used by the Choroti and the Ashluslay as scrapers. It is, of course, impossible to draw up a map of the distribution of such tools.

Very characteristic of the Indians of the stoneless Chaco, the Choroti, Ashluslay, Tapiete, Lengua[1]) and Mataco,

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[1]) GRUBB, p. 75.

A c 412 are their knives, saws or scrapers and awls of very hard wood. The knives (fig. 12) are used, for instance, for cutting up fish and fruit, the saws for cutting off caraguatá boughs and for grating the «Mandioca del campo» (manioc). Such tools of wood are unknown among now living Indians, save in the Chaco. Occasionally flat bone knives are seen. I have seen them among the Tapiete and the Atsahuaca, as well as among the Choroti, and the Ashluslay. The wooden tools were originally made in this way: when there had been a forest fire, suitable pieces of wood were selected, which were then shaped by means of the fire and pieces of shell. They are now cut by knives obtained from the whites.

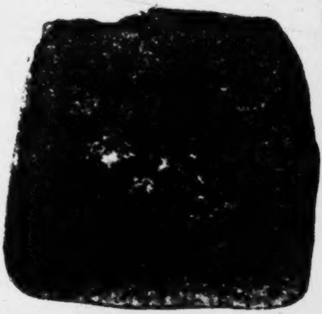
Fig. 13. Iron Knife, Choroti. G. M. (D. 1027) 1/2.

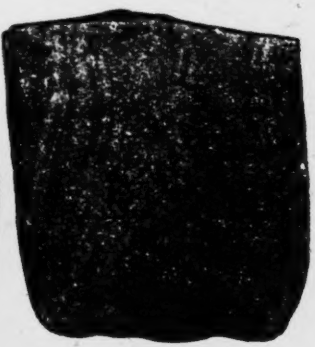
Fig. 12. Wooden Knife. Choroti G. M. (D. 1025) 1/2.

A c [439] By their migrations to the sugar factories in the Argentine, the Chaco Indians have obtained many iron tools. Where iron is still rare, all the pieces of iron are preserved that can be utilized. In Fig. 13 is shown a piece of iron used as a knife, it having received a shape similar to that of the original wooden knives.

The *wooden knives*, as we have seen, are of a square shape. This shape may possibly not have originated in the Chaco. I have found similar stone knives (Fig. 14) in my excavations

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in a burial ground in Caipipendi in the Chiriguano territory, and BAESSLER[1]) found knives of similar shape, now of stone, now of a copper alloy at Chancay on the Peruvian coast. Bronze knives of this type are also mentioned by LATCHAM[2]), from Caldera in Chile and AMBROSETTI from N. Argentine[3]). I found a bronze knife of this kind at Quiaca in Peru[4]). The knives discovered during archaeological excavations are broader than the wooden ones now in use in the Gran Chaco. Owing to the resemblance in shape that exists between the wooden knives in the Chaco, the stone knives of Caipipendi and the stone and copper or bronze ones from the culture zone in the west, I consider this form of knife, for the present at least, to belong to the cultural elements which reached the Chaco from the culture of the mounains.

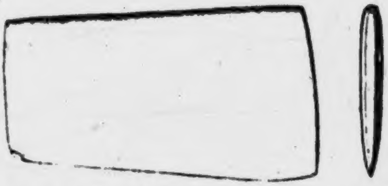

Fig. 14. Stone knife, found at Caipipendi in Bolivia. R. M. (K. 191) 1/4.

The *toothed scraper* also seems to be (Fig. 15) a western cultural element. AMBROSETTI[5]) depicts and describes some from La Paya, and assumes that they were used as carding-tools. Very possibly they had a different use in the Chaco from what came under my notice. AMBROSETTI

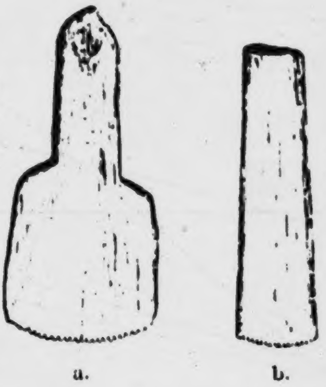

Fig 15. Toothed scrapers of wood. Ashluslay, a — G. M. (B. 247) b — G. M. (B. 233) 1/4.

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[1]) p. 41, fig. 71–75.

[2]) (2), p. 13, fig. 5.

[3]) (3), p. 193.

[4]) NORDENSKIÖLD (3) Pl. 2, fig. 21.

[5]) (6) Vol. 2, p. 483, fig. 254.

found them in four female graves and in a child's grave. Three of Ambrosetti's «saws» are adorned with carved human heads. I found a similar object of stone (Fig. 16) which may have been used in this way, at Caipipendi in the Chiriguano territory.

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Wooden awls, which I only know from the Chaco, are used by the Choroti and Ashluslay for letting blood.

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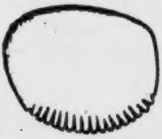

Fig. 16. Toothed stone scraper, Caipipendi. Bolivia. R. M. (K. 194) 1/4

XII.

Fire-making Apparatuses.

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The method of obtaining fire in the Gran Chaco still consists of drilling with two rods. However, the use of matches, or flint and steel, has obtained a fairly wide spread, thanks to communication with the whites. Cow horns and the tail of the armadillo are used as tinder boxes. Caraguatá bark is used as tinder.

Wooden fire-sticks are widely distributed in S. America. Two kinds may be distinguished. One is so constructed that the powdered wood falls along a groove at the side of the fire-stick onto the tinder. With the other, fire is obtained by drilling through a thin piece of bamboo. In this case the drilling is usually performed with the shaft of an arrow in an arrow-head. I have observed the former kind among the Choroti, Ashluslay, Toba, Mataco, Tapiete, Chiriguano, and Huanyam. It is known almost throughout S. America with the exception of Tierra del Fuego. The latter kind I have seen among the Yuracáre, Chacobo and Guarayú.

It is of some interest to note that the Choroti and Ashluslay in making fire place the drilling-rod in the shaft of an arrow. It this way they can take quite short rods with them on their hunting excursions and other outings.[1])

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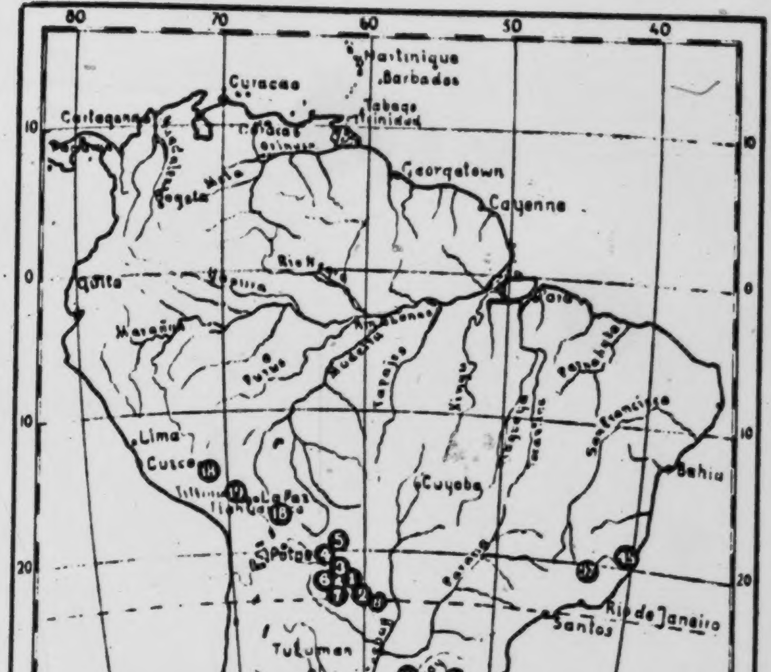
[1]) See v. Rosen (1) Pl. 13.

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6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Map 7. Tribes that use the Wooden Spit exclusively.

XIII.

Fire-places and Accessories.

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The fire-places of the Indian tribes here dealt with consist of a few branches laid on the ground, pointing to the same centre, over which the food is roasted or cooked.

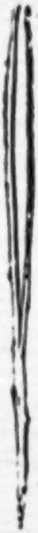

Fig. 17. Wooden spit. Ashluslay. G. M. (C. 407) $^1/_4$.

ODD

The babracot is unknown in the Chaco, as it is in the Andes, in Patagonia and in Tierra del Fuego. In the Chaco the *Wooden spit* is used exclusively. It is sometimes furcated. (Fig. 17)[1]). Of the Indian tribes visited by me the following exclusively used the spit (Map 7): (2) Ashluslay, (19) Aymara, (5) Chané (4) Chiriguano (1), Choroti, (6) Mataco (18) Quichua (3) Tapiete (7) Toba. The Mestizos in the Argentine also use the spit exclusively.

The following tribes which I have visited are acquainted with the *babracot* Atsahuaca, Cavina, Chacobo, Chámа, Chimane, Guarayú (Mission); Guarayú (Pauserna), Huanyam, Huari, Tambopata-Guarayo, Yamiaca, Yuracáre.

The babracot and probably also the spit, are to be found among most of the tribes in Brazil, Guayana, Venezuela, and Columbia. The spit, but not the babracot, are stated to be used, in addition, by the (44) Charrua[2]) (97)

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[1]) See also »Indianerleben«, pl. 10.

[2]) Araujo, p. 121.

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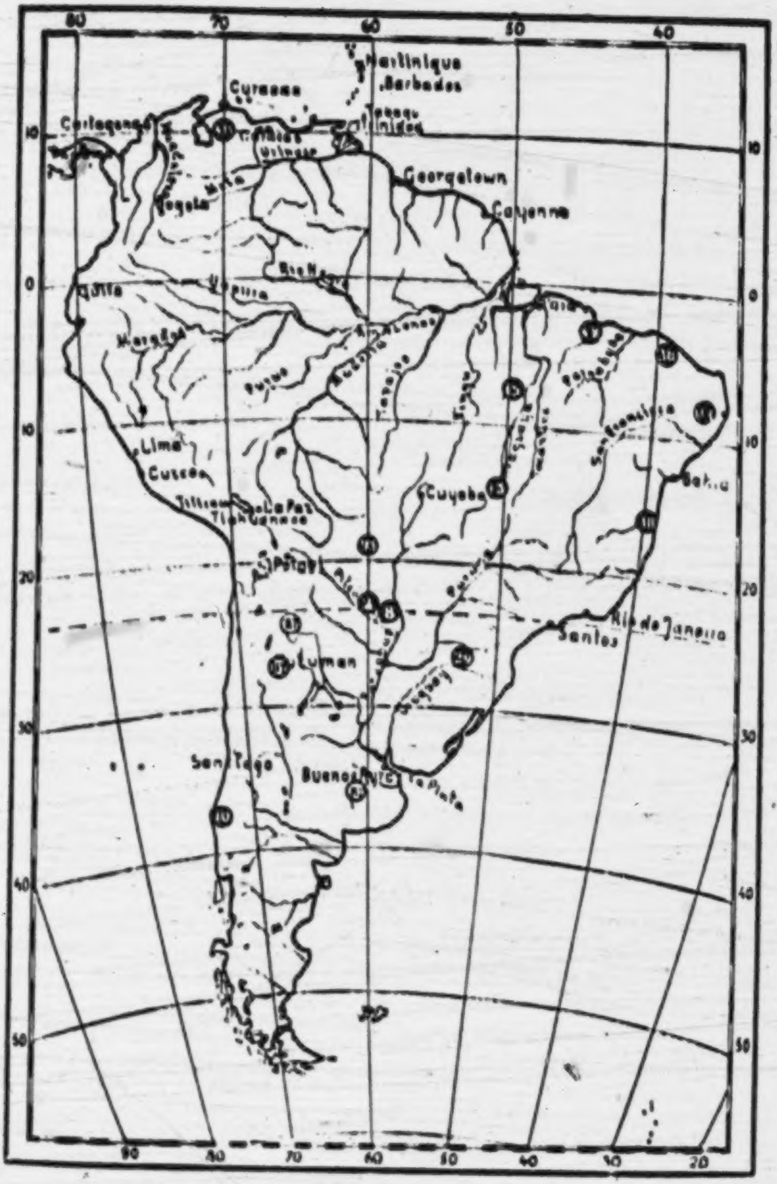
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Map. 8. Distribution of the Pit Oven.

2: Nordenskiöld E-5 (1908-1909)1919 -
SK6 Choroti
Ashluslay SK5

000 Purí[1]), (45) Botocudo[2]), (V) Yaro = Chaná[3]), (VI) Guarani on the R. Uruguay[4]), (29) Caingáng, Rio Grande do Sul[5]) (27) Ona[6]), (10) Araucanians[7]), (26) Tehuelche[8]) and (8) Lengua[9]).

The spit is used generally throughout the Argentine pampas. According to MAX SCHMIDT[10]) the babracot is not used by the Guató.

The spit is of course a very old cultural element, certainly older than the babracot. On the pampas of Argentine and in the mountains where wood is scarce and strong winds prevail, the babracot has naturally not been employed. But it might well have been, on the other hand, in the Chaco and among the Guató.

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The Ashluslay bake in deep holes or pit ovens. I have seen the fruits preparing in them. (Fig. 18). These *pit ovens* have been elsewhere observed by me only among the Tsirakua Indians of the Chaco Boreal.

Pit ovens (Map 8) comparable with those in common use among the (2) Ashluslay and (93) Tsirakua are known from the (8) Lengua in the Chaco [11]) the (03) Tapuya,[12]) (4 x) Timbiras Macamecrans[13]) and 38) Tupi[14]) in E. Brazil, the Indians in the district (4 B) of Baraquicimeto, Tocuyo and Coro in Venezuela[1]) the (15) Kayapó[2]) and (29) Caingáng[3]) as well as the Araucanians.[4]) [5])

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[1]) WIED Vol. 1. p. 3.

[2]) WIED, Vol. 2, p. 31.

[3]) SEPP, p. 51.

[4]) SEPP, p. 54.

[5]) TESCHAUER, p. 23—24.

[6]) COJAZZI, p. 336.

[7]) GUEVARA (1), p. 94. LENZ, Vol. 1. p. 171.

[8]) BEERBOHM, p. 55.

[9]) GRUBB, p. 96.

[10]) (3) p. 203.

[11]) FRIEDERICI, (3) p. 5., following GRUBB.

[12]) PISO et MARCGRAV, p. 281.

[13]) RIBEIRO p. 321. «Aquelle asqueroso methodo de preparar as suas comidas em covas feitas no chão, cobrindo as viandas com terra afogueada de pedras quentes».

[14]) PISO et MARCGRAV, p. 273.

The Mestizos in (87) the Argentine, from Salta to Buenos Aires, also use pit ovens in preparing their famous national dish «Carne con cuero». In the province of Jujuy in the Argentine I have seen Mestizos dig a big pit in the ground in which they made a fire until they had sufficient glow. They then laid the head of a cow in it, and the pit was covered over again. Several hours later the roast cow-head was taken out, and it tasted excellent.

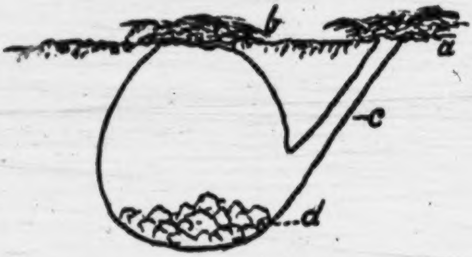

Fig. 18. Pit Oven.
Ashluslay. a = surface. b = bark, grass, etc c = draught hole, d = slow fire.

We can see from the distribution of the pit oven that it is a cultural element which, outside the Chaco, is best known in E. Brazil. We can safely count it among the very old cultural elements.

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[1]) Simon, p. 384. «No siēbran porq su sustento es frutas de la tierra, que siempre las ay, en especial datiles, caça de conejos, y venados, q los asan, metiendolos enteros en vn oyo con su pellejo, y pelo, auiendoles quitado solo las tripas: Calientan primero el hoyo muy bien, con leña, o paja, y sacandoles las brasas, o ceniza, meten el venado, tapan muy bien con ojas de vihao, y dentro de dos horas lo vueluen a sacar».

[2]) Krause, p. 388.

[3]) Ambrosetti (1), p. 349 (25).

[4]) Medina, p. 208 (following Carvallo, Historiadores de Chile, Vol. 10)

[5]) Friederici (3) has dealt with the distribution of these pit ovens all over the world.

Ashluslay

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In the Chaco *fire-fans* of feathers are used. In S. America we can distinguish between a western district with feather fire-fans (Map 9) and a northern and eastern with firefans of plaited palm leaves.

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I have seen feather fire-fans among the following tribes: (2) Ashluslay, (1) Choroti, (6) Mataco), (3) Tapiete, (7) Toba, (22) Yuracáre and (32) Atsahuaca,[1]); and palm-leaf fire-fans among the Cavina, Chacobo, Chané, Chimane, Chiriguano, Churápa, Guarayú (Mission) Guarayú (Pauserna), Huanyam, Itonama and Siriono.

As far as I have seen, the Aymara and Quichua do not use fire-fans specially made for this purpose. Nor do the Tierra del Fuegians. I have not found any such implements among the Cháma, either. Among the Tambopata-Guarayo, who are closely related to them or indentical with them, I only found a specimen of a small, round fire-fan plaited out of fibre, very different from the fire-fans found among other tribes[2]).

According to PATER SCHMIDT[3]), who has collected some material concerning the distribution of different kinds of fire-fans in S. America, the following tribes have feather fans: (34) Jivaro, (33) Campa, Tšantšamayo[4]) Cokama[4]) (68) Omagua and (86) Yahua. To these, besides the tribes already mentioned, I can add the (12) Mbayá[5]) and the Indians of the upper R. Marañon,[6]) and furthermore grave finds from (A) Pachacamac, Peruvian coast[7]). Fire-fans of

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[1]) NORDENSKIÖLD (2), p. 30.

[2]) NORDENSKIÖLD (2), fig. 31.

[3]) p. 1083.

[4]) Not given on the map.

[5]) SÁNCHEZ LABRADOR; Vol. 1. p. 213.

[6]) OVIEDO Y VALDÉS following GASPAR DE CARVAJAL, Vol. 4, p. 550. Not given on the map, as CARVAJAL does not indicate the tribes among which he has seen these fire-fans, and I have better located references to the same district.

[7]) SQUIER, p. 91.

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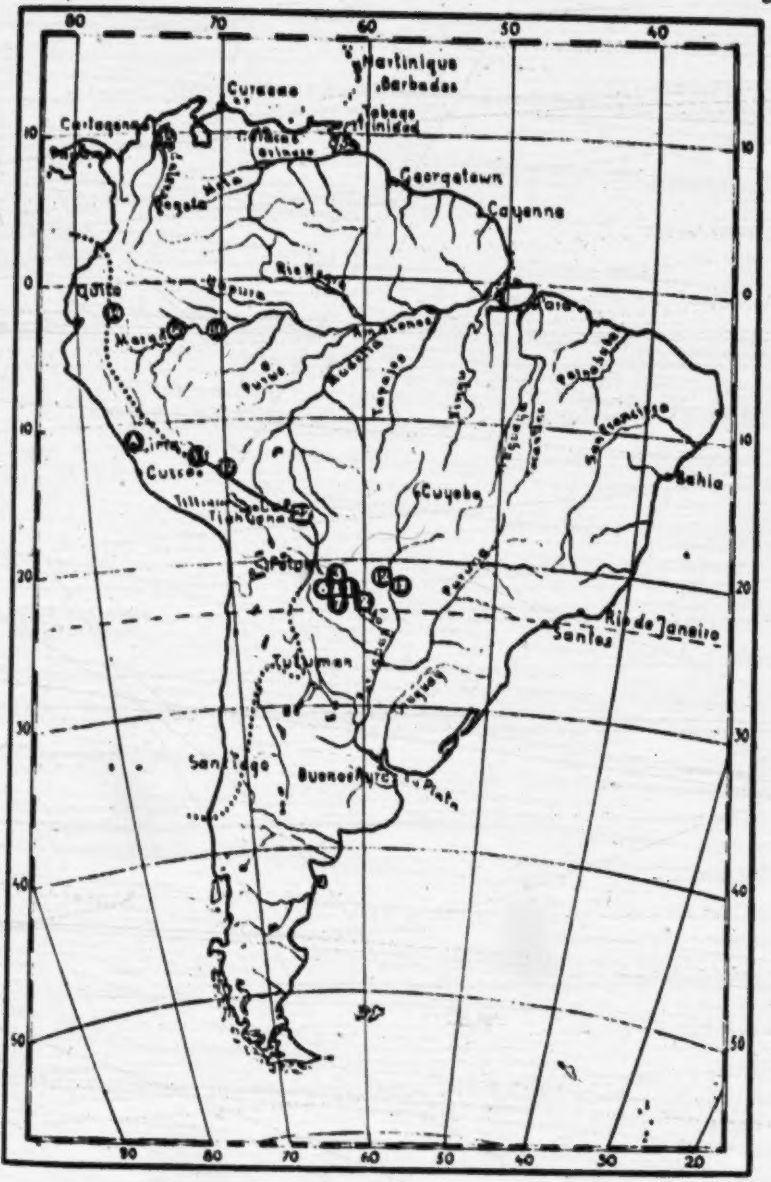
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Map 9. The Distribution of the Feather Fire-fan.

ODD palm leaves are widely distributed in the whole of central, northern and eastern S. America.

It cannot be said that fire-fans of feather only occur where no suitable material exists for plaiting them out of palm leaves. Both the Yuracáre and the Atsahuaca have a greater abundance of suitable palm leaves at their disposal than the Chiriguano and the Chané, and yet the former have feather fire-fans, the latter palm leaf ones.

The feather fire-fan is clearly a cultural element with a purely westerly distribution. It is not only the occurrence of the material that decides what kind of fan is used in different places, but old custom is persistently followed everywhere.

XIV.

Utensils used in preparing and consuming Food.

a). *Utensils for preparing flour.*

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The Chaco Indians here dealt with understand how to prepare flour, as most of the Indians do. For this purpose they use small wooden mortars with pestles of the same material. Occasionally the Ashluslay quite simply use a pit in the ground as a mortar.

Two ways of grinding corn may be said to exist in S. America, in one the corn being crushed in a mortar, while in the other it is ground between stones or between a stone and a wooden block. The distribution of the two methods may be seen from the following table.

No. on the map.	*Tribes which use wooden mortars.* (See Map 10).
61, 48.	Tribes on the R. Negro, R. Yapura and R. Iça, KOCH-GRÜNBERG (2); WHIFFEN[1]), p. 141.
64.	Huari.
40.	Guarayú, Guarayos.
28.	Bakaïrí, STEINEN (3), p. 363.
90.	Chipaya, SNETHLAGE, p. 94.
15.	Kayapó, KRAUSE, p. 388.
13.	Karajá, KRAUSE, p. 254.
50.	Šavajé, KRAUSE, p. 358.
4.	Chiriguano.
21.	Cainguá, OUTES Y BRUCH (5) p. 95.
3.	Tapiete.

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[1]) According to WHIFFEN the mortar is only used for pulverizing coca leaves.

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No. on the map.	
5.	Chané.
6.	Mataco.
1.	Choroti.
2.	Ashluslay.
7.	Toba, upper R. Pilcomayo.
9.	Toba, lower R. Pilcomayo, Ducci, p. 8.
20.	Paressi—Kabiši, Max Schmidt (4), p. 206.
96.	Syeberís, Chaco Boreal, Schmidel, p. 257.
38.	Tupinambá, Piso et Marcgrav, p. 271; Thevet, p 302.
41.	Guarayú, Pauserna.
38.	Tupinambá, Yves d' Evreux, p. 168.
55.	Kalina, F. P. Penard and A. P. Penard, Fig. p. 112.
31.	Trio, Goeje (1), List of words, p. 76.
47.	Patamona, Thulin, oral evidency.
47.	Makusi » » »
47.	Arecuna » » »
54.	Guahibo, Stradelli, fig. 16.1.
69.	Ipurina, Ehrenreich, (2), p. 62.
29.	Caingáng, Ambrosetti, (1), p. 325.
4X.	Gês tribes, Maranhão, Ribeiro, p. 188.
XI	Yamamadi, Ehrenreich (2), p. 55.
5B	Parirí, Nimuendajú-Unkel (1), Word-list.
X	Yurúna, v. d. Steinen (2), fig. p. 261.
V3	Caripou, Mocquet, p. 87.
6V	Guaná, Comingues, p. 225.
IX	Colorados, Rivet, (1) p. 191.
6B	Ackawoi, Schomburgk, Vol. 1. p. 201.
74.	Indians on the lower R. Orinoco, Gilij, fig.
60.	Apiacá, R. Tapajos, Coudreau, p. 185.
59.	Chrichaná, Barbosa Rodrigues, p. 151.
5c	Nambiquara, Roquette-Pinto (2), p. 186, not marked on the map.
36.	Ijca, Bolinder, G. M.
16.	Guató, Max Schmidt, p. 29. Fig. 81.

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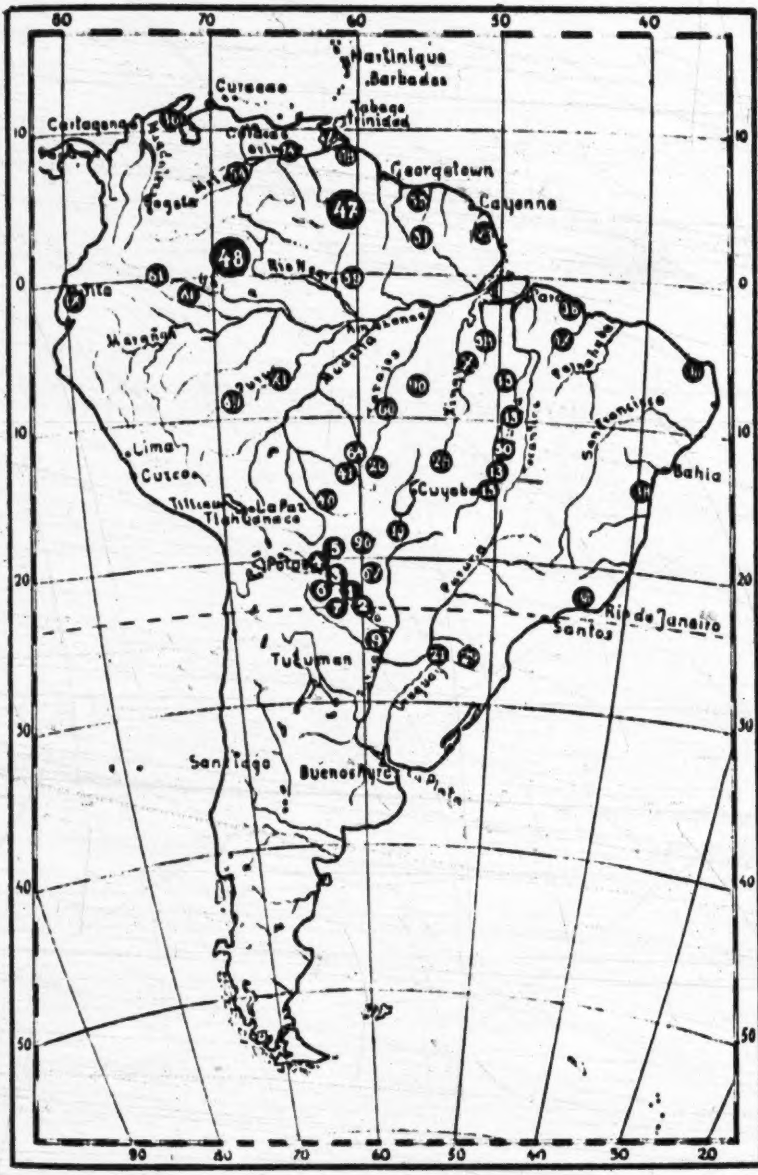
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Map. 10. Distribution of the Wooden Mortar.

ODD *The following tribes grind on a stone or a wooden block with a stone or wooden block (mill).*

Atsahuaca, Stone on stone.
Tambopata-Guarayo, » » »
Yamiaca, » » »
Ona, GALLARDO, p. 173, » »
Mosetene, Stone on block of wood
Chimane, » » »
Yuracáre, » » »
Itonama, Stone in trough of wood
Huanyam, » » » » »
Chacobo, Wooden block in wooden trough.
Cavina, » »
Sibipo, V. d. STEINEN (5) Word list, p. 49, stone on stone.
Aymara, stone on stone.
Tehuelche, » » »
Araucanians, LATCHAM, p. 342; PISO et MARCGRAV, p. 285. SMITH, pp. 3 and 315. stone on stone.
Chibcha, RESTREPO, p. 122 stone on stone,
Indians, Chuquimayo, PALOMINO, p. L. Grind Indian corn in «batanes» of stone or wooden troughs.
Quichua (Incas), GARCILASSO DE LA VEGA, p. 207[1]) [2]) RIVET (2) Riobamba, p. 63.
Paez, PITTIER, Pl. IV. 2 Stone on stone
Jjca, BOLINDER (4), p. 57 » » » Also have mortars, probably not Indian.
Motilon, BOLINDER (4), p. 58 » » »
Chimila, » » » »
Goajiro, » » » »

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[1]) «La harina la molian las mugeres en vnas losas anchas, donde echauan el grano, y en cima del trayan otra losa hecha a manera de media luna, no redonda, sino algo prolongada de tres dedos de canto. En los cornejales de piedra hecha media luna ponian las manos, y assi la trayá de canto de vna parte a otra sobre el Mayz.»

[2]) COBO, Vol. 4, p. 170, says expressly that mills are used for preparing flour, and that, for grinding smaller things, they had little stone mortars.

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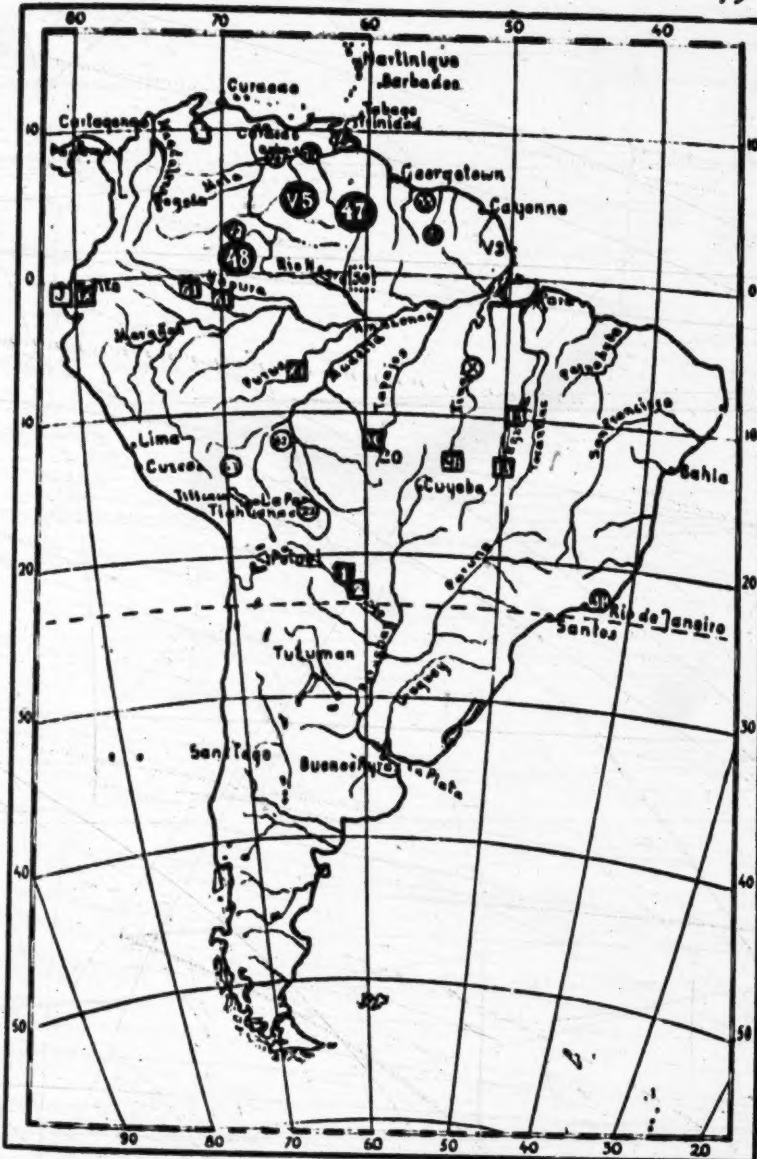
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Map. II. Distribution of the Manioc Grater.

○ Tribes that use a prickley root of a certain kind of palm. ■ Tribes that use a board into which sharp wooden points have been driven. ● Tribes that use a board with stone splinters driven into it. 20.V3 material not specified. Grating boards with teeth instead of stones. ◻ Grating board of baked clay with stones fastened in the clay.

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*Some finds of mills of stone or baked clay*1).

Mounds, Mojos, NORDENSKIÖLD (10), p. 224. Block and roll of baked clay.

Puna de Jujuy. Stone.

N. Argentina, BOMAN, p. 306, 691; AMBROSETTI (6) Vol. 2 p. 440. Stone.

Rio Cotacajes and Covendo, Bolivia. Stone.

Cordova, OUTES (6), p. 332 seq. Stone, almost mortar-shaped.

Buturo, NORDENSKIÖLD, (3) p. 157. Stone.

San Blas, Argentine, OUTES (4), p. 257. Stone.

Patagonia, Mortar and mill. OUTES (3), p. 431). Stone.

Querandi, BRUCH and OUTES (5), p. 104. Stone.

Corantijn, Surinam, F. P. PENARD and A. P. PENARD, p. 56. Stone.

Sambaquis, Brazil, IHERING, (3), p. 539. Stone.

Rio de Janeiro. NETTO, p. 509.

Thus we see that the wooden mortar for preparing flour in S. America is above all an easterly and northerly cultural element. In some districts the Indians probably learnt the use of the mortar from negroes and whites. It speaks in favour of the pre-Columbian occurrence of the mortar in the Chaco, however, that it is already mentioned for this district by SCHMIDEL. That they should have ground with stones in the mountains of the west of S. America. is not remarkable, as it was difficult or impossible there to find suitable trunks of trees out of which to make large mortars. On the other hand it is very curious that in the wooded districts of N.E. Bolivia there are no mortars, the corn being ground

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1) The Linden Museum at Stuttgart has an old Peruvian receptacle of wood from Chancay on the Peruvian coast, which was perhaps a mortar; heavy, and made out of a piece of palm trunk, it is 25 cm. high and about 20 cm. deep, with an upper diameter of 13 cm. in the opening. The exterior has incisions which (apparently added later, being very rough) are inlaid with white and red pieces of shell and rock-crystal to form human and other figures (Communicated by Professor Dr. Koch-Grünberg.)

000 with stones in wooden troughs, or on wooden blocks, or with wooden blocks in wooden troughs.

A C 252 Both the Choroti and the Ashluslay sift the corn through a net, and not therefore through a sieve specially made for the purpose. Of the tribes I got to know on my travels, the Toba, Mataco and Tapiete generally employ this method. All the others[1]) used baskets. The latter include the Chiriguano and Chané.

Pockets are also used for sifting. Honey is strained by the Ashluslay through a specially prepared straining cloth of Caraguatá.

A C 252 412 As I have mentioned, the Ashluslay cultivate manioc. So do the Choroti, and probably some of the Mataco Indians. The cultivation of manioc must have reached the Chaco from the north or east. The boards used for rubbing the manioc root, are usual among the Ashluslay and Choroti Indians. These boards, which consist of a piece of palmwood into which numerous splinters of wood have been driven, clearly belong to the cultural elements that the Chaco Indians obtained from the north or east. Among a few tribes in N.E. Bolivia a prickly root of a palm is simply used as a grater, these natural graters probably representing the original type. In some districts sharp splinters of stone, instead of wooden splinters, are driven into the grating board.

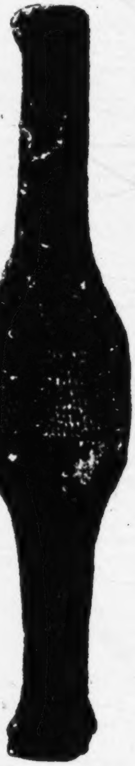
Fig. 19. Manioc-Grater, Ashluslay. G. M. (A. 1662) $^1/_3$.

000 I. The following tribes use a prickly root of a palm as a grater: (62) Chacobo, (22) Yuracáre, (63) Yamiaca and (X) Yurúna.[2])

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[1]) With the possible exception of the Huari.

[2]) KLETKE, p. 683.

2: Nordenskiöld E-5 (1908-1909)1919

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Ashluslay. SK5

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II. The following tribes use a board into which wooden splinters have been driven:

(2) Ashluslay (Fig. 19), (1) Choroti, (28) Bakaïrí[1]) and Suyá[1b]), (XI) Yamamadi[2]), (13) Karajá[3]), (61) Boro, Uitóto, and other tribes between the R. Putumayo and the R. Yapurá[4]) (IX) Colorados[5]) and (5C) Nambiquara.[6])

III. The following tribes use a board with stone splinters driven into it: (38) Tupinambá[7]), (74) Sáliva and other tribes on the R. Orinoco[8]), (47) Patamona, Macusi, Arecuna and other tribes in Guayana[9]), (48) Siusí and other tribes in N.W. Brazil.[10]), (V2) Indians on the R. Guainia[11]), (V5) Makiritare[12]), (55) Kalina[13]), (31) Trio[14]) (V 5) Yekuaná and Guinaú on the upper R. Ventuari and R. Merewarí.[15])

IV. Without specification of the material: (20) Paressi-Kabiši[16]) and (V3) Caripou at Yapoco[17]).

The (59) Chrichana[18]) have grating-boards with teeth instead of stones. The Waika[19]) use rough slabs of granite

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[1]) v. d. Steinen (2) p. 124.

[1b]) do. p. 206. Not marked on the map.

[2]) Rio Purus, Ehrenreich (2) p. 55 »Palm wood spikes.«

[3]) Krause p. 251. Spikes of »Prejauva wood«.

[4]) Whiffen, p. 131. Palm spikes.

[5]) Rivet (3), p. 101.

[6]) Roquette-Pinto (2), p. 185.

[7]) Lery, p. 110. Thevet, p. 302.

[8]) Gilij, Vol. 2, p. 304. fig.

[9]) Im Thurn, p. 260, Museum Material G. M. etc.

[10]) Koch-Grünberg (2) Vol. 1. p. 77 seq. Vol. 2. p. 205.

[11]) Ernst, p. 527.

[12]) Ernst p. 528, Krickeberg, p. 89. fig. 6.

[13]) Ten Kate, p. 3.

[14]) Goeje (2) p. 5.

[15]) Koch-Grünberg (communicated by letter).

[16]) Max Schmidt (4) p. 206.

[17]) »rapent sur vne pierre ou sur vn bois faict en facon de lime«. Mocquet, p. 83. »Ce pays d'Yapoco est à plus de 120 lieues du pays des Toupinambous.« Mocquet, p. 89.

[18]) Barbosa Rodrigues p. 151.

[19]) Koch-Grünberg (4), p. 200.

2: Nordenskiöld E-5 (1908-1909) 1919
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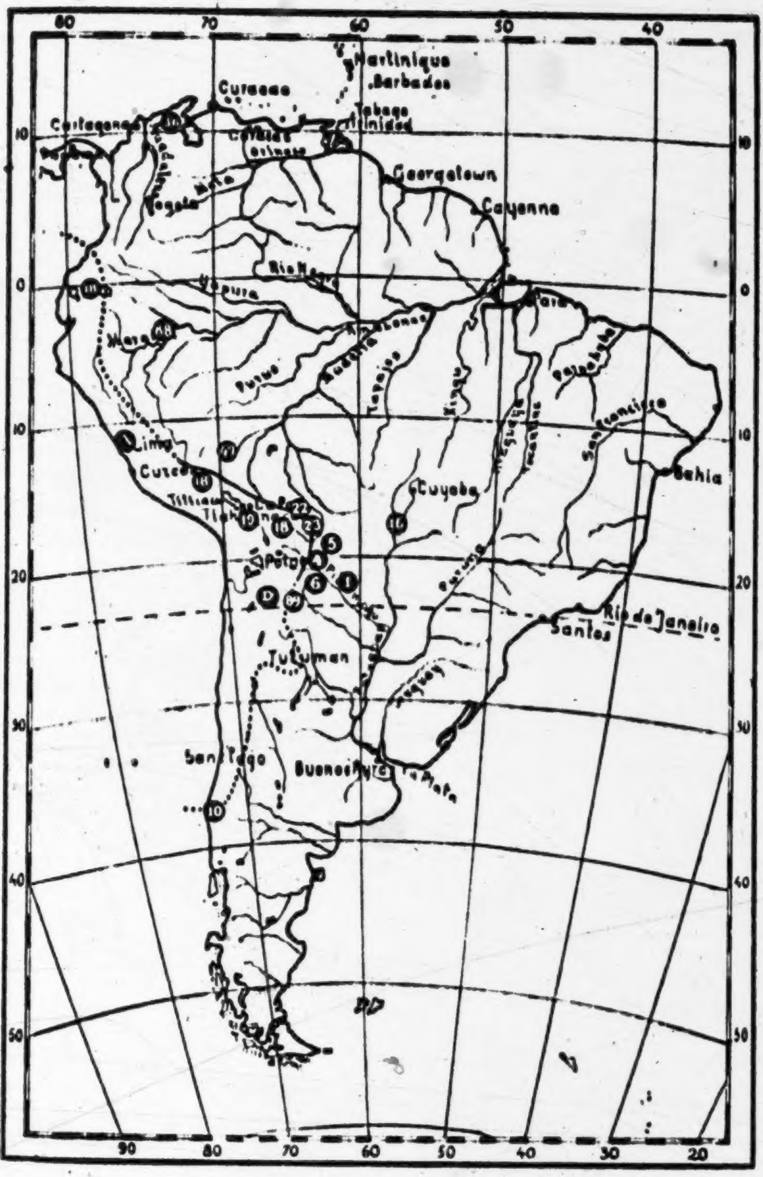
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Map. 12. The Distribution of the Wooden bowl.

650 as graters. On the coast of Ecuador (J) they have found grating-boards (?) of baked clay with stones fastened in the clay[1]).

It is of great interest to see that in N.E. Bolivia we only find the most primitive form of manioc grating-boards.

b) *Cooking utensils.*

A C [252 [415] 323] The Ashluslay and the Choroti cook their food in simple pots of baked clay. Of the tribes I have visited in my travels, the Cháma and Tambopata-Guarayo Indians are the only ones that have no clay vessels. For the rest, very few S. American tribes have no cooking utensils of baked clay. They are the Botocudo and some other Gês tribes, the tribes of Tierra del Fuego, and now also the Patagonians.

c) *Wooden spits.*

(See Chapter XIII).

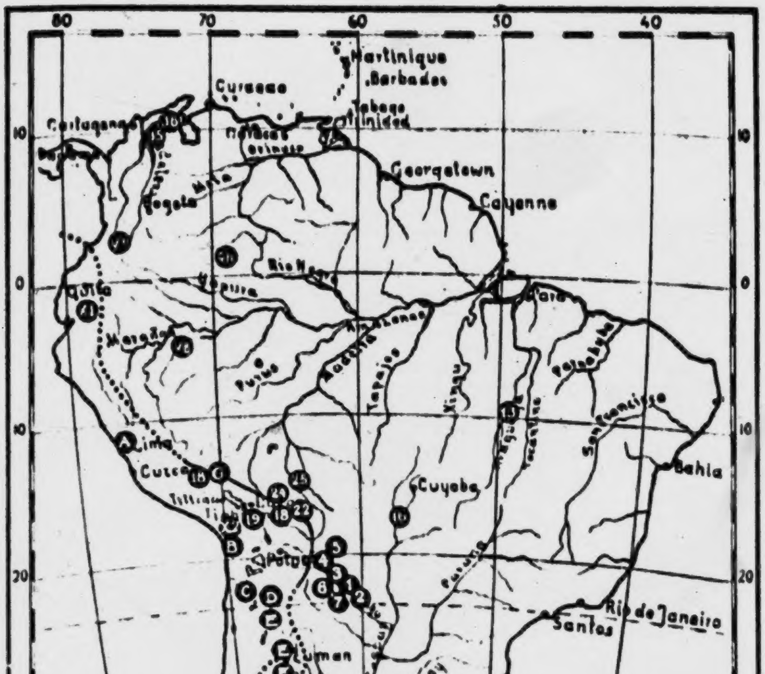
d) *Platter, etc.*

A C 415 [264] The (1) Choroti and (2) Ashluslay eat off dishes of baked clay, or off calabash shells. The former, and probably also the latter, have wooden platters as well. The Ashluslay also have large wooden basins.

I have seen wooden bowl (Map 12) among the following tribes in addition to those named: (19) Aymara, (18) Quichua, (5) Chané (4) Chiriguano (6) Mataco, (22) Yuracáre, (23) Churápa and (89) among Indians on the Calilegua, Argentina.

650 They are also known from the (18) Quichua, Papallacta in Ecuador[2]) (10) Araucanians,[3]) (16) Guató[4]) (49) Araona[5]) (36) Ijca[6]) and the (68) Omagua (?)[7]).

[1]) Joyce, Pl. 6. fig. 2.
[2]) Uhle (1) Vol. 2. Pl. 17. fig. 18—19.
[3]) Latcham (1) p. 342.
[4]) Max Schmidt (3) p. 211.
[5]) Armentia p. 60.
[6]) Bolinder (4) p. 59.
[7]) M. f. V. L. (S. Am. 1350).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Map 13. Distribution of the Wooden Spoon.

000 Archaeological excavations have brought to light wooden bowles in the (D) Puna de Jujuy[1]) and on (A) the coast of Peru[2])

To judge from the distribution, the wooden bowl is a cultural element that the Chaco Indians received from the mountain civilization. The archaelogical finds of wooden bowls in N. Argentina show that they were used there in pre-Columbian times.

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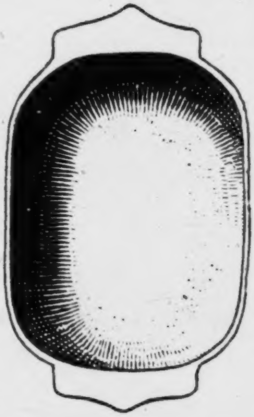

Fig. 20. Wooden dish, Choroti. G. M. (W. 634)¹/₆.

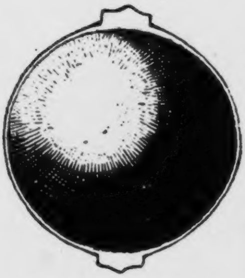

Fig. 21. Wooden bowl. Quichua-Mestizos. Calilegua, N. Argentina. R. M. (u. 24) ¹/₆

The shape of the little handles on the wooden dishes of the Choroti Indians are very similar to those on the bowls of the Quichua-Mestizos in N. Argentina (Figs 20. 21).

e) *Eating utensils.*

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The (1) Choroti and (2) Ashluslay have spoons of wood (Map 13) and horn. As eating utensils they also use mussel-shells and calabashes.

000 Besides the above-named tribes, I have seen the following tribes in the course of my travels who used wooden

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[1]) Lehmann-Nitsche (1), Pl. 5. E. 12.

[2]) Putnam, Pl. 26. fig. 6 and 7.

000

spoons: (19) Aymara, (18) Quichua (5) Chané (22) Yuracáre (24) Chimane, (3) Tapiete (4) Chiriguano (6), Mataco, (7) Toba and (25) Mojo.

For the rest the wooden spoon is not known from many now living Indian tribes. Max Schmidt[1]) describes and depicts wooden spoons from the (16) Guató, Latcham[2]) from the (10) Araucanians, Ehrenreich[3])from the (13) Karajá, Koch-Grünberg[4]) from the (48) Indians on the R. Aiary in NW. Brazil, Ratzel[5]) from the (V8) Peba and Regel[6]) from the (V9) Indians in Timaná, Columbia.

Uhle[7]) depicts wooden spoons from (X1) Quero (Ambato) Ecuador, (X2) Tacna (Chile), Timana Columbia, and Calderon (Amazon R.) Brazil. Bolinder[8]) found wooden spoons among the (36) Ijca and the (35) Chimila Indians in Columbia. Wooden spoons are also to be found among many half-civilized Indian tribes in Brazil.

Archaeological excavations have brought to light numerous wooden spoons in Peru, Bolivia and Argentine, proving the wooden spoon to have been a pre-Columbian cultural element there.

Similar spoons have been excavated in the (D) Puna de Jujuy[9]) at (A) Ancon on the Peruvian coast[10]) at (B) Arica[11]) at (E) La Paya in N. Argentina[12]) at (B) Hualfin,

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[1]) (3) p. 206.
[2]) (1) p. 342.
[3]) (2) p. 26.
[4]) (2) Vol. 1. 2. 111.
[5]) Vol. 1. Pl. to p. 477.
[6]) Pl. 24. fig. 12.
[7]) (1) Vol. 2. Pl. 7.
[8]) (4) p. 50.
[9]) Lehmann-Nitsche (1) Pl. 3. fig. 24. 25. Pl. 4. H. 4. Pl. 5. C 3 and E 17; Boman, p. 650. 657.
[10]) Reiss and Stübel, Vol. 3. Pl. 83, fig. 1 and 2.
[11]) Joyce, Pl. 26. Ewbank, Pl. 10. fig. 2.
[12]) Ambrosetti (6) Vol. 2. p. 466.

Ashluslay SK5

000 Catamarca[1]) at (E) Amaicha, Tucuman[2]) in (c) the Puna de Atacama[3]) in (F) San Juan[4]) in Argentine, and in the (G) Ollachea valley, Peru.[5]).

As far as one can judge, the wooden spoon is pre-Columbian in the Chaco. But evidently some forms of it, which are found among tribes that have had much do to with white men, were carved under the influence of the metal spoon which the Indians acquired from the whites (Fig-25, D.-G.). Still we must not forget that a tribe now carves its wooden spoons on the model of spoons it has acquired from the whites, and yet may have known the spoon at a time when its culture was not influenced by them.

It is therefore very hard to decide where the spoon is a purely Indian cultural element. But that in the main the spoon is a westerly cultural element, is clear. The spoons found among the Choroti and Ashluslay are exactly like the spoons that have been found in old graves in N.W. Argentine, and in consideration of this, as well as of the distribution of the spoon in general, one has every right to assume that this cultural element is derived from the mountain culture. The spoons

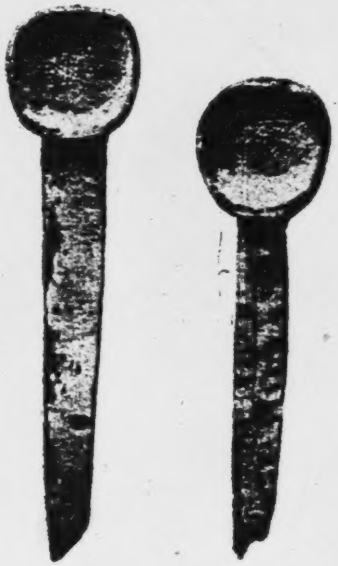

Fig. 22. Wooden spoons from old graves. Rio San Juan del Mayo in Puna de Jujuy (After LEHMANN-NITSCHE.)

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[1]) BRUCH (2) fig. 23.

[2]). AMBROSETTI (2) fig. 249.

[3]) BOMAN, p. 759. AMBROSETTI (4), Pl. 3. fig. 39—41

[4]) DEBENEDETTI (4) p. 78. fig. 62.

[5]) NORDENSKIÖLD (3), p. 32.

Ashluslay SK5

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found in old graves, as well as the spoons of the Choroti and Ashluslay Indians have a straight handle and a more or less circular bowl (figs. 22 and 24 A, B. C).

The *horn spoon* must be post-Columbian, the material being new.

The *shell spoon* is very widely distributed. It is probably in universal use wherever suitable material is to be found. This is also true of the *calabash spoon*.

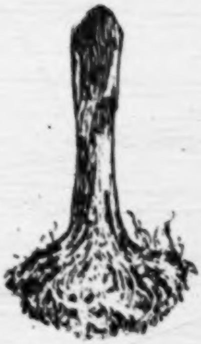

Fig. 23. Eating-brush of Caraguata. Ashluslay G. M. (A 1417).

A really original eating utensil is the *eating-brush* (fig. 23). I have seen them in common use among the Ashluslay. They are also known from the Guayaki Indians in Paraguay[1]) [2]) In the Chaco they are used for eating honey.

The *wooden knife* used for eating water-melons[3]) I have seen exclusively in the Chaco.

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[1]) Kunike.

[2]) Roquette-Pinto (2) (p. 195) also mentions them from the »sertanejos meladores« in Matto Grosso.

[3]) See »Indianerleben«, fig. 18.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti
Ashluslay SK5
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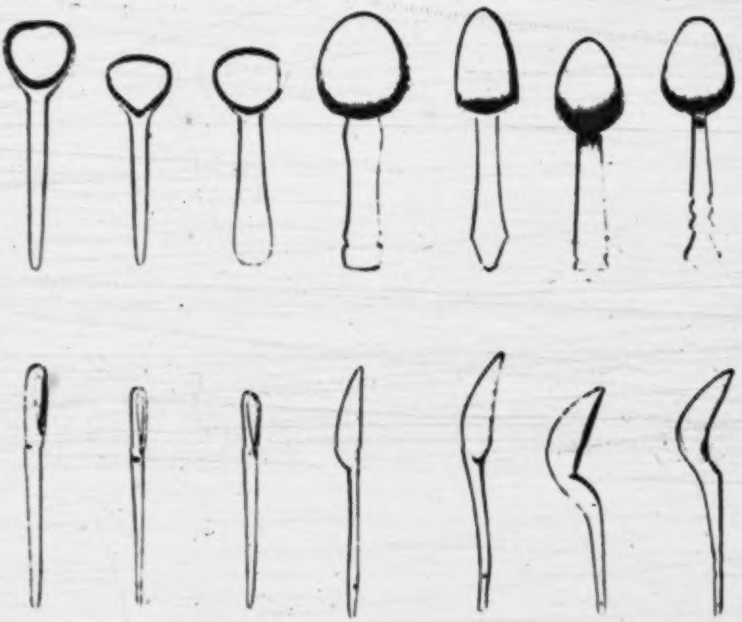

Fig 21.

A.	Wooden	spoon.	Ashluslay	R.	M.	A.	215 [1].
B.	»	»	»	»	»		212 .
C.	»	»	»	G.	M.	C.	100 .
D.	»	»	Taplete	R.	M	Lt.	6. .
E.	»	»	Mataco	»	M.		382 .
F.	»	»	Chané	»	P.		97 .
G.	»	»	Mataco	»	M.		1001 .

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6
Ashluslay SK5

XV.

Means of Indulgence.

The Tobacco Pipe (Map 14)

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The Indian tribes here dealt with are keen smokers, and cultivate tobacco themselves.

Chewing coca is unknown to them.

In the following table I give a résumé touching the smoking of tobacco and the chewing of coca in the parts of S. America visited by me.

	No. on the map.	Cultivation of tobacco.	Smokers.	Cigarette Smokers.	Pipe Smokers.	Coca chewers.	Tobacco used only as a medicament.
Ashluslay	2	+	+		+	—	—
Atsahuaca		?	?	?		?	?
Aymara						+	—
Baure		+	+	+	—	—	—
Cavina		?		?	—	+	—
Chacobo		+			—	—	+
Cháma		-?	—	—	—	—	?
Chané		+	+	+	—	—	—
Chimane	24	+	—	—	—	—	+
Chiriguano		+	+	+	+	—[1]	—
Choroti	[illegible]	+	+	—	+	—	—
Churápa		+	+	+	—	—	—
Guarayú (Guarayos)	40	+	+	+	+	—	—

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[1] Coca chewing has been introduced of late among a small number.

2: Nordenskiöld E-5 (1908-1909)1919

SK6 Choroti SK6

Ashluslay SK5

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	No. on the map.	Cultivation of tobacco	Smokers	Cigarette Smokers	Pipe smokers	Coca chewers	Tobacco used only as a medicament
Guarayú (Pauserna)		+	+	+	—	—	—
Huanyam		+	+	+ ?	—	—	—
Huari		+	+	+ [1]	—	—	—
Itonama		+	+	+	—	—	—
Mataco	6	+	+	—	+	—	—
Quichua		—	—	—	—	+	—
Sirionó	51	—	+ ?	—	+ [2]	—	—
Tambopata-Guarayo		+	—	—	—	—	?
Tapiete	3	+	+	—	+	—	—
Toba	7	+	+	—	+	—	—
Tsirakua		?	?	?	?	?	?
Yamiaca		?	?	?	?	?	?
Yuracáre		+	—	+ [3]	—	—	+ [3]

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The Choroti and the Ashluslay smoke pipes, as the table shows. The pipe is also known to the following tribes, besides those given in the résumé: (52) Mocovi[4], (x 4) Payaguá[4], (8) Lengua[4], (11) Chamacoco[4], (12) Mbayá[4], (21) Caingua[4], (13) Karajá and (50) Savajé[4,8], (46) Conibo[5], (10) Araucanians[4], (26) Tehuelche[4], (63) Tapuya[6], (37) Motilon[7], Arecuna and Patamona[9].

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[1] Cigars.

[2] According to Cardús, p. 282. »No para fumar, sino para humear.»

[3] Not great smokers. Tobacco chiefly used as a medicament.

[4] Nordenskiöld (3 B)

[5] Uhle (1), Vol. 2, Pl. 27, fig. 12.

[6] Roulox Baro, p. 248, 251; Piso et Marcgrav, 274 p.

[7] Bolinder (2), p. 37.

[8] Krause, p. 350.

[9] G. M. Collection Liljewalch-Thulin. Not marked on the map.

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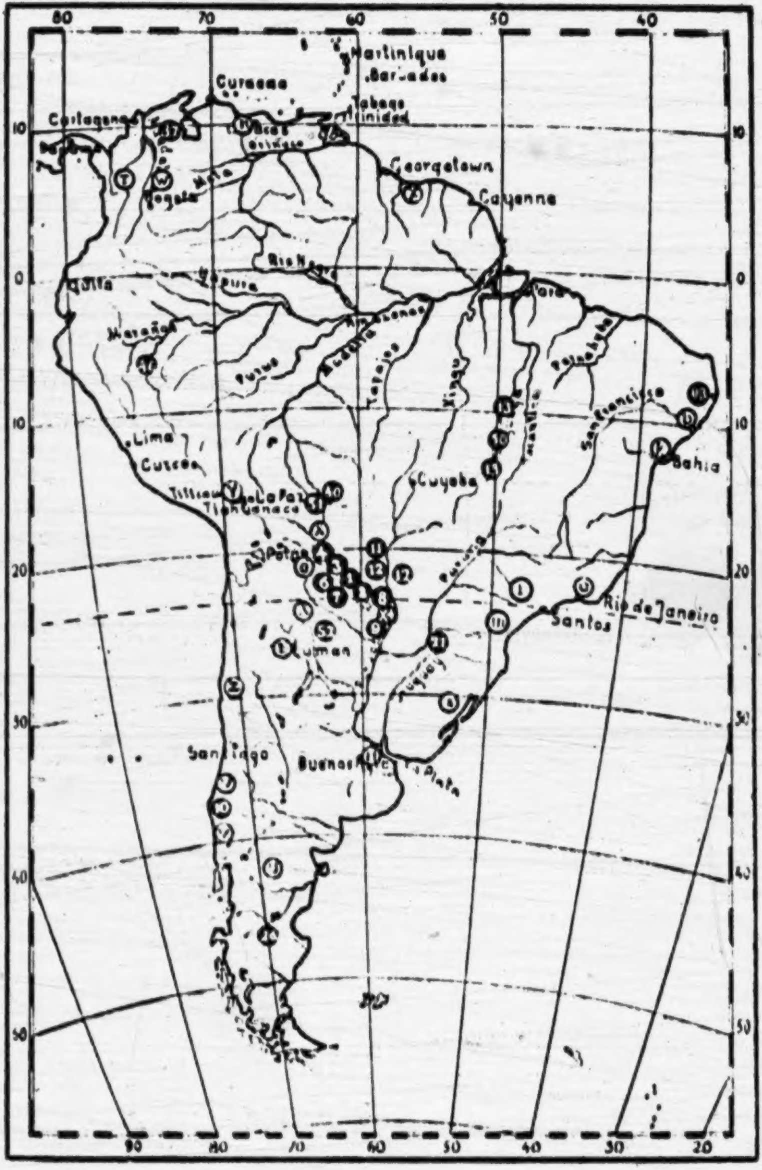
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Map 14. The Distribution of the Tobacco Pipe.

500 Archaeological excavations have unearthed pipes in (U) Patagonia1), in (V), (Z) Chile2), at several places in (A), (E) N. Argentine1), in (S) Rio Grande do Sul1), (m) Parana1), (1) San Paulo1), (b) Alagoas1), (k) Bahia1), (x) Surinam1), (R) on the L. of Valencia in Venezuela1), on the Island (Y) of Koati on the L. of Titicaca3) at (W) Tunja1) and (T) Antióquia1) in Columbia and at (Ä) Caipipendi (Ö) Tarupayu in S. Bolivia and at (H) Buenos-Aires5).

As we see, the tobacco pipe has a considerable distribution in S. America, and is probably a very old cultural element there. This holds good especially of the simple tubular pipes in common use among the Choroti and the Ashluslay.

In the west of S. America, in the old culture zone, pipes have been found only in (E), (A) N. Argentina and on (Y) the Island of Koati on the L. of Titicaca. No pipes have been found in the old graves on the coast of Peru. Smoking was probably unusual in Peru, although tobacco was cultivated there. However, it seems to have been used occasionally as snuff. The medicine men employed tobacco to induce ecstasy4). It is therefore, as we see, not to be assumed that the Chaco Indians learnt smoking from the cultural tribes of the Andes.

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276 For *cleaning the pipe* the Ashluslay and the Choroti use specially prepared *little pointed sticks.* I have not seen them elsewhere. Like the Mataco they also make use of a filter of plant fibres in their pipes, of which I have seen no mention as regards other Indian tribes. The Chaco Indians occasionally mix their tobacco with a fragrant bark.

The Ashluslay and the Choroti have many different types of pipes, some of which I have depicted in earlier works. It is impossible to say whence these types derive.

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1) NORDENSKIÖLD (4 B).

2) GUEVARA (2).

3) BANDELIER, Pl. 77.

4) v. TSCHUDI, p. 131. with bibliography

5) Ameghino Vol. 1, p. 415.

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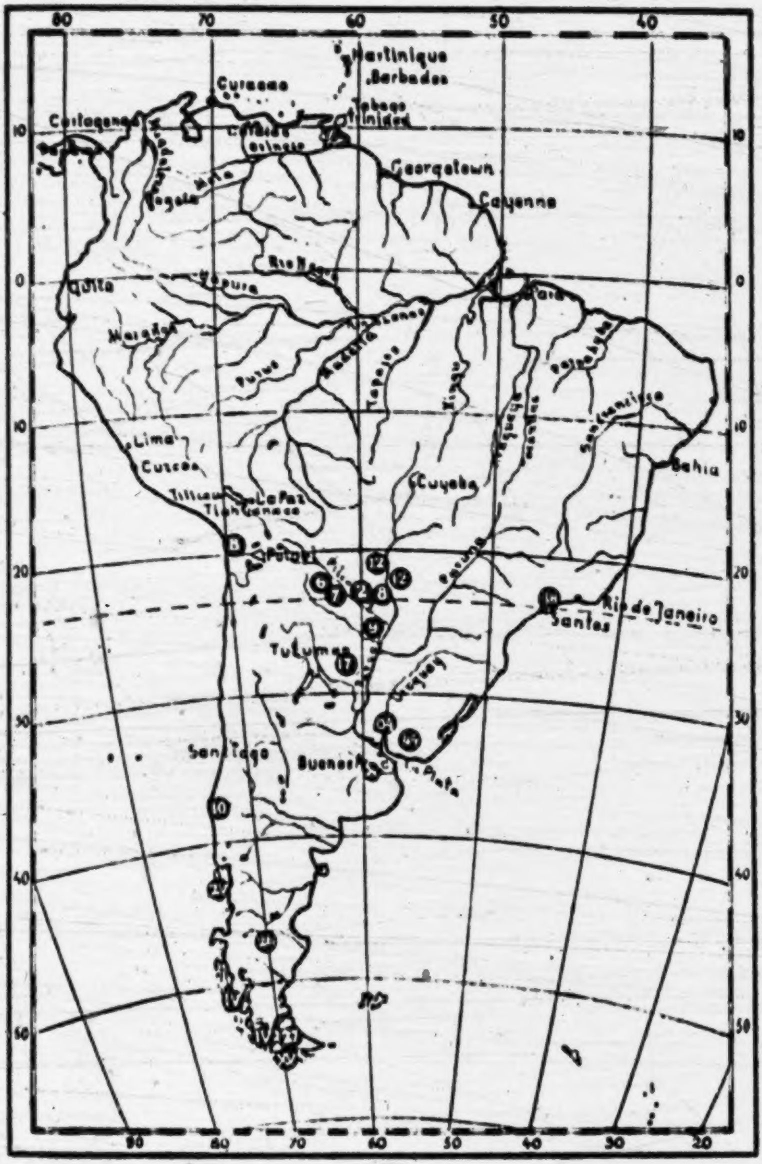
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Map. 15. The Distribution of the Fur Cloak.

XVI.

Dress.

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The men of the tribes here dealt with, wear, as a rule, big mantles or blankets of home-woven woollen material in which they wrap themselves. They sometimes wear leather sandals. They fasten the blanket with a girdle of leather or woven wool. Occasionally they wear very short shirts, sewn of Caraguata, and now and then woollen shirts. More rarely they wear a poncho. The younger Choroti and Mataco women have a kind of shirt made of textile material, which they get from the whites; the older women have a apron of similar material, or of woven cloth, round their loins. In the same way the Ashluslay women wear an apron of leather or home-woven wool. Occasionally the younger women have a short skirt, called a «tipoy». The women, too, sometimes wear sandals. They do not fasten the apron round the loins by means of a girdle, but by a cord. Now and then the Ashluslay women have large four-cornered cloaks made of a number of coypou or sheep skins sewn together.

Fur cloaks (Map 15) are practical in the cold climate of the most southerly part of S. America and in the mountains. But they are not used in the Andes. In the Chaco, among the tribes I am dealing with, they were formerly in common use, but are now disappearing. This is owing to the fact that the coypou skins from which they are generally made are in great demand among the whites as an article of trade, so that the Indians prefer to use them for barter rather than as an article of clothing. Woven cloaks have, moreover, displaced fur cloaks. Characteristically it is exclusively the conservative women in the Chaco who wear the fur cloak. A C 291

Fur cloaks are worn in the Chaco with the fur inside. The plain side of the skin is generally painted. Each [531] skin is painted separately, and then a number are sewn together.

The Tehuelche also wear their cloaks with the fur inside. The Ona, however, wear them with the fur outside, and this tribe leaves the plain side unpainted.

I have seen these cloaks among the (6) Mataco, (2) Ashluslay and (7) Toba, where they are usually made of coypou skin, rarely of sheep or fox-skin. DOBRIZHOFFER[1]) mention ooo them from the (17) Abipone, DUCCI[2]) from the (9) Toba, SANCHEZ LABRADOR[3]) from the (12) Mbayá, SCHMIDEL[4]) from the (3V) Querandi, HAWTREY[5]) and GRUBB[6]) from the (8) Lengua, STADEN[7]) from the southern (38) Tupinambá, ARAÚJO[8]) following PERNETTY from the (44) Charrúa, SEPP[9]) from the (04) Yaro-Chaná, FALKNER, MUSTERS, PIGAFETTA[10]) and others from the (26) Patagonians, GALLARDO, COIAZZI, OTTO NORDENSKJÖLD and others from the (27) Ona, SKOTTSBERG[11]), MEDINA[12]), HYADES and DENIKER[13]) and other from the (XV) Yahgan, the (2V) Chono and the (1V) West Patagonians,

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[1]) Vol. 2, p. 142.
[2]) p. 60.
[3]) Vol. 1, p. 280.
[4]) p. 150.
[5]) p. 282.
[6]) p. 62.
[7]) Vol. 2 (p. 3).
[8]) p. 120.
[9]) p. 50.
[10]) p. 12—13.
[11]) p. 207.
[12]) pp. 166—167.
[13]) p. 317.

000 Medina[1]) from the (10) Araucanians (?). Uhle[2]) found similar cloaks at (B) Arica.

The fur cloak belongs to the southern cultural elements which extend right up into the Chaco, and show that the original culture of the tribes living there is connected with that of the Patagonians and Fuegians.

As an every day garment the fur cloak is unpractical in the Chaco, which has a tropical climate and is infested with insects. But it is good to have when the cold winds sweep over the plains. Dobrizhoffer[3]) says that among the Abipone the fur cloak is used by men and women alike when the weather is cold. *Old people of both sexes wore fur cloaks in the warmest weather.* They evidently clung to an old custom.

A c 291

The commonest male dress among the Choroti and the Ashluslay is a large home-woven *woolen cloak*, in which they drape themselves in the same way as in their fur cloaks.

I found the woven cloak in use among the Chané, Choroti, Mataco, Toba, Ashluslay and Tapiete. Hawtrey[4]) mentions it from the Lengua, Falkner[5]) from the tribes in Patagonia, except the «Tehuelhets» and «Chechehets», Luis de la Cruz[6]) from the Peguenche, and Dobrizhoffer[7]) from the Abipone.

000 In the mountains home-woven rugs were, and are still, used as beds. When used as a article of dress by the men, they always have a hole in the middle for putting the head through (Poncho).

The Aymara and Quichua women wear a shawl round the shoulders.

[1]) p. 104.
[2]) p. 11.
[3]) Vol. 2, p. 132.
[4]) p. 282.
[5]) p. 112.
[6]) p. 33.
[7]) Vol. 2, p. 120.

Ashluslay SK5

These cloaks are now made in the Chaco out of sheep's wool. We may therefore ask whether the custom of making and using these cloaks dates from post-Columbian times, or whether it is older, i. e. were they made of other material in pre-Columbian times? SCHMIDEL[1]) says that the Indians in the Chaco had llamas, which I consider not at all improbable, as it is known for certain that the Indians in N. Argentina had llamas as far south as Córdova, and, as we shall see from the following, the Chaco Indians had connections with these Indians. It is certain that llama can live in the Chaco, as the guanaco, which is very closely allied to the llama, is found between the R. Parapiti and the R. Grande. It is therefore possible that in pre-Columbian times they had cloaks of llama wool. Still, it is probable that in pre-Columbian times more cotton was used than now for textile fabrics. SCHMIDEL speaks exclusively of cotton clothes. The Indians possibly weave more than they used to since sheep-rearing was taken up. It is certainly not the white men that taught them to weave. A C 291

The Tsirakua Indians in the Chaco Boreal have cloaks of Caraguatá. 000

It is not impossible that these cloaks once had a much wider distribution than now.

The *Poncho* is, as everybody knows, a square piece of cloth with a hole in the middle, through which the head is put. The poncho being sewn together at the sides, with an opening left for the arms, the result is a sleeveless shirt. To this sleeves can then be sewn. The poncho has certainly developed from the cloak, it being nothing but a cloak with a hole in the middle.

Apart from the cloak, the poncho and the shirt, the Indians throughout S. America have no native male garment which protects the body from cold and which covers the greater part of it. This slight variation in the cut of the

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[1]) p. 248.

000 clothes is no doubt due to the Indians not having understood the art of weaving cloth by the yard, and the cutting off pieces to make clothes, but have woven their pieces of cloth to the size of the garment.

In pre-Columbian times the art of cutting out garments from cloth may be said to have been unknown in S. America.

The shirt and the poncho are typically western cultural elements, which we only find within the old culture zone and in contiguous districts. In the mountains the primary object was to protect the body against cold. Also in the parts east of the Andes, as in the Gran Chaco and in Mojos, the weather can be very cold during certain parts of the year, particularly in May and June. In the primeval forests clothing is, moreover, a protection against insects, and therefore practical in every region.

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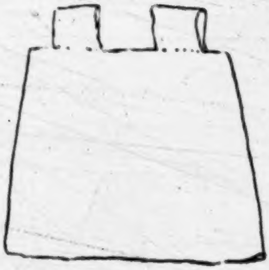

Fig. 25. Shirt of Caraguatá.
Ashluslay. R. M. (A. 1516) $^1/_{10}$.

The poncho is worn exclusively by men, the shirt occasionally by women, the latter being presumably due to the influence of the missionaries, who abhorred nakedness.

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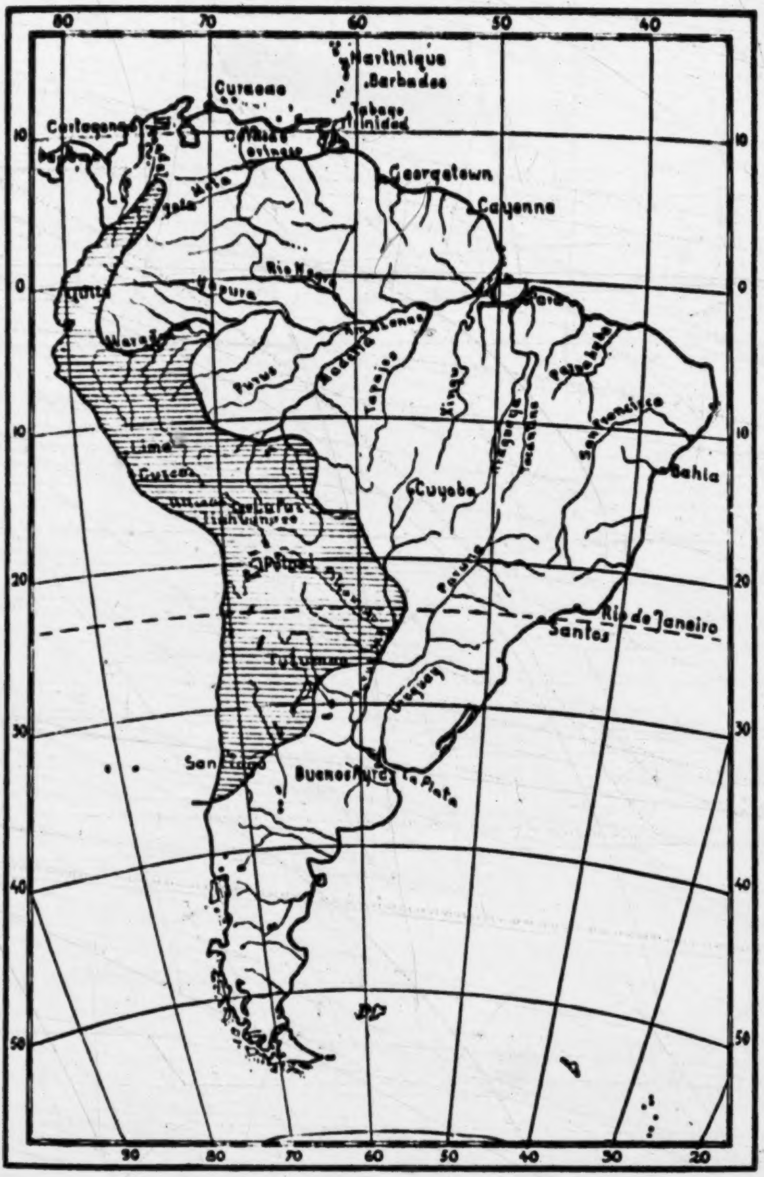
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San Francisco
Bahia
Lima
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Cuyaba
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Map. 16. The Distribution of the Shirt.

000 As an article of dress for men, the shirt reaching to the feet was also introduced by the missionaries as a transition garment to European clothes

As has been stated, it is of interest that among the Mbayá the long shirt is only worn by the medicine men[1]), and among the Chiquitos only by chiefs and the Indians of high rank. Again, just as the chiefs and the medicine men were the first to adopt the clothing of the whites, they adopted the garb in use among the cultural races in the Andes. They set the fashion.

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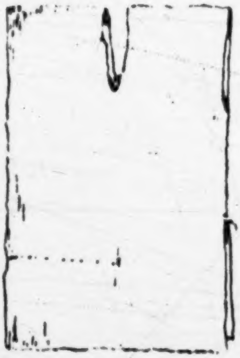

Fig. 26. Shirt of Caraguatá.

Ashluslay. R. M. (A. 1514) 1/18.

From the following table we can see the distribution of the *shirt* in the districts visited by me. In Map 16 I have dotted the district where the shirt is, or was, used. As I have mentioned, the distribution of the shirt has been extended in post-Columbian times.

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[1]) Sánchez Labrador, Vol. 1, p. 284.

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6
Ashluslay SK5

The Distribution of the Shirt +
in the districts visited by me (See Map 16).

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	Reaching to the feet.	Used by the men.	Used by the women.	Material.
Ashluslay.		+	–	Caraguatá³).
Atsahuaca	+	+	–	Bark fabric¹)
Baure.	+	+	+	Cotton.
Chacobo.	+	+	–	Bark fabric
Cháma	+	+	+	» ¹)
Chané	+	+	–	Cotton.
Chimane.	+	+	+	» ²)
Chiriguano.	+	+	–	»
Choroti.	–	+	–	Caraguatá
Guarayú (Guarayos)	+	+	+	Cotton²)
Guarayú (Pauserna)	–		–	
Huanyam	+	+	+	Bark fabric
Huari	–		–	
Itonama.	+	+	+	Cotton.
Mataco	–	+	–	Caraguatá³)
Siriono.	–	–	–	
Tambopata-Guarayo.	+	+	–	Bark fabric ¹)
Tapiete.	–	–		
Toba.	–	+		Caraguatá.
Tsirakua.	–	–		
Yamiaca.	+	+	–	Bark fabric ¹)
Yuracáre.	+	+	+	»

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[1] or cotton.
[2] or fabric of bark.
[3] or wool.

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The Distribution of the Shirt according to archaeological finds.

BOMAN[1] mentions the shirt from Casabindo, Sayate (Puna de Jujuy), Chiuchiu and Calama (Puna de Atacama), Ancon, Pachacamac, Paramonga, Fresco de Pucará de Rinconada (rock painting) and Chulin. Shirts on the coast of Peru have been found, for instance, depicted in REISS and STÜBEL's big work on Ancon. BANDELIER[2] found shirts in graves on L. Titicaca, DEBENEDETTI[3] a shirt in a grave in San Juan.

The Distribution of the Shirt as recorded in literature before 1800.

Men.

The Indians of the mountain districts of Columbia[4], Paez[5], the Indians of Llactacunga, Ecuador[6], of Pansaleo, Ecuador[7], of the Peruvian coast[8], the Chanca[9], Inca[10], Juri[11], Diaguita[12], Comechingon, Sierra de Córdova[13], Pacaje (Aymara[14].) Araucanians?[15] Omagua[16], the Indians of the upper R. Marañon[17], tribes of the upper reaches of the Amazon1), Chuquimayo2), Zevero3), Mayna4), Mojo5), Chiquitos6), Mbayá7), Chaná8), and Payaguá9).

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[1] p. 500 and p. 754.

[2] Pl. 62 and 66.

[3] (4) p. 70.

[4] PIEDRAHITA, p. 15. (not precolumbian, RESTREPO, p. V.)

[5] URICOECHEA (2) p. XIII, following RODRIGUEZ, p. 74.

[6] CIEZA DE LEON (1), p. 151

[7] ibid, p. 146.

[8] ibid. p. 219–220.

[9] ibid, p. 315.

[10] COBO, Vol. 4, p. 160; CIEZA DE LEON (1), p. 270.

[11] CABRERA, p. 140.

[12] PACHECO, p. 147.

[13] NARVAEZ, p. 151.

[14] MERCADO DE PEÑALOSA, p. 59.

[15] MEDINA, p. 164.

[16] [MARONI] p. 106. LAUREANO DE LA CRUZ p. 98. Tribes lower down the Amazon naked. LAUREANO DE LA CRUZ, p. 108, 109.

[17] ORTIGUERA p. 322, 329.

Women.

Chiquitos10), Cholone and Hibito, on the Huallaga11) and the Peruvian coast12).

The Distribution of the Shirt as recorded in literature since 1800

Men.

Köggaba13) Indians of Otavalo, Ecuador14) Yumbo15) Zaparo16) Ankutere 17) Piro18) Campa18) Amahuaca18) Remo18) Conibo18),20) Setebo18) Sipibo18) Cashibo18) Manetenery19) Canamary20), Guarayú21), Araona22), Huachipairi23) and Motilon24).

1) ibid. p. 370.

2) PALOMINO, p. XLIX–LI.

3) CHANTRE Y HERRERA, p. 143.

4) SAABEDRA, p. CXLIV.

5) EDER, p. 220; CASTILLO, p. 324. Of bark fabric or cotton.

6) FERNANDEZ, p. 31; BURGOS, p. 42.

7) SÁNCHEZ LABRADOR, Vol. 1, p. 284.

8) ibid. Vol. 2, p. 270.

9) AZARA (1), p. 120.

10) FERNANDEZ, p. 41.

11) SKINNER, Vol. 1, p. 403.

12) CIEZA DE LEON (1), p. 210–220.

13) BOLINDER (1), p. 62.

14) UHLE, (1) Vol. 2. Pl. 14. fig. 2. Quichua speaking Indians, Ecuador.

15) OSCULATI, p. 107.

16) ibid. p. 168.

17) ibid. p. 194.

18) RAIMONDI, p. 98–99.

19) Rio Yuruá, CHANDLESS, p. 101.

20) Rio Purús, CHANDLESS, p. 103.

21) D'ORBIGNY, Vol. 2, p. 328.

22) ARMENTIA, p. 61.

23) LA COMBE, p. 13.

24) BOLINDER, (2) p. 29.

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Mitua[1]), Guahibo[2]), Yururo[3]), Aguaruna[4]).

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The poncho is used by the Chiriguano, Chané, Quichua, Aymara, and rarely by the Choroti, Toba, Mataco, Tapiete and Ashluslay. From books I have noted the poncho for the following tribes: Ijca[5]), Inca[6]), Patagonians[7]), Goajiro[8]) Peguenche[9]), Araucanians[10]), Coroado or Gaingang[11]), Rio Rio Grande do Sul, Guaná[12]), Gran Chaco and Colorados[13]) Ecuador (very small). Uhle[14]) depicts ponchos of Indians or mestizos at Pasto in Columbia and Quito in Ecuador. Debenedetti[15]) found a poncho in a grave at San Juan. Boman[16]) mentions ponchos from graves in Puna de Jujuy and Puna de Atacama.

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It plainly follows from the distribution of the shirt and of the poncho that these cultural elements derive from the mountain culture of the Andes. It is remarkable that their distribution has not extended. The long, trying work required for weaving a shirt has, of course, been a hindrance to its spread. That shirt and the poncho have not driven the woollen cloaks from the Chaco is probably due to their serving at the same time as excellent rugs, and that it is espe-

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[1]) Crevaux, p. 178.
[2]) Ibid. p. 550.
[3]) Ibid. p. 500.
[4]) Quintanilla, p. 78.
[5]) Bolinder (4), p. 61.
[6]) Cobo, Vol. 4, p. 160.
[7]) Falkner, p. 112.
[8]) Pleyte, p. 246.
[9]) Luis de la Cruz, p. 34.
[10]) Latcham (1), p. 336.
[11]) Teschauer, p. 21.
[12]) Cominges, p. 405.
[13]) Rivet (3), p. 186.
[14]) (1) Vol. 2, Pl. 13.
[15]) (4) p. 70.
[16]) Boman, p. 503 and p. 754.

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cially at night that the Indians there must protect themselves against cold.

The real garb of the Indian woman among the Choroti, Mataco and Ashluslay consists, apart from the fur cloak mentioned above, of a *loin cloth*. It may be, as it often is among the Ashluslay, sewn together of several deer skins stripped of the hair, or it may consist of a piece of woollen cloth, as among the Choroti and Mataco. Occasionally the Ashluslay girls may be seen wearing a short skirt woven in one piece, a short «tipoy» (fig. 27).

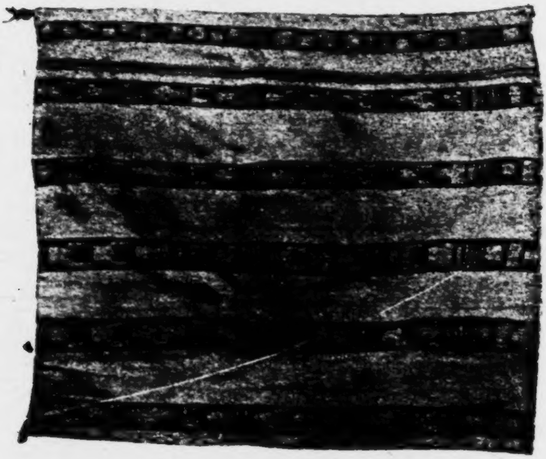

Fig. 27. Woman's garb of wool. «Tipoy». Ashluslay.
G. M. (A. 173) 1/8.

The oldest of these is undoubtedly the fur garment. We find it, moreover, among the Lengua[1]). The garment of home woven woollen fabric was probably introduced, like the woven cloak, under the influence of the mountain culture.

000 We do not find the like among the tribes I visited in N.E. Bolivia and its environs.

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[1]) GRUBB, p. 69.

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The *tipoy*, i. e. a sack open at both ends, which is worn as a skirt when short, and from the shoulders to the feet when long, occurs inter alia among the Ashluslay (of wool, short), Guarayú-Pauserna (of cotton, short), Siriono (short, knitted of bark fibre), Guarayú (short, cotton)[1], Karkhohbries (Gorocotoques, cotton)[2], Mojo[3]), Carios-Tupinambá[4]), (long), Paressi-Kabiši[5]) (short, of cotton), Chiriguano and Chané (of cotton or wool, long), Chiquitos[6]) Guarani, Paraguay[7]), Xarayes[8]) (of cotton), Guayaná[9]) and Payaguá[10]).

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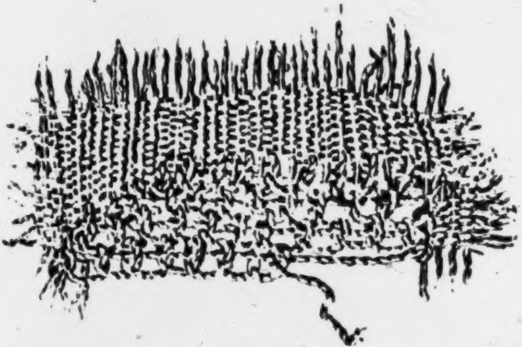

Fig. 28. Piece of a woman's dress, darned. Choroti.
G. M. (D. 2390) 2/3.

The clothes, especially the women's clothes, are often darned. (Fig. 28). On the other hand, you never see them patched. To mend a hole by putting a patch over it, seems to be unknown to the Indians throughout S. America, i. e., the Indians who have still kept their original culture. The Incas, too, did not patch, but darned their clothes[1]) 500

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[1]) D'ORBIGNY, p. 328 (Guarayos).
[2]) SCHMIDEL, p. 264.
[3]) CASTILLO, p. 324.
[4]) STADEN, Vol. 2 (p. 3) PISO et MARCGRAV, p. 270.
[5]) MAX SCHMIDT (4), p. 180.
[6]) BURGOS, p. 42.
[7]) AZARA, (2), p. 416.
[8]) NUÑEZ CABEZA DE VACA, Vol. 1, p. 300.
[9]) TESCHAUER, p. 18.
[10]) AZARA (2), p. 360.

As foot-gear the (1) Choroti (Fig. 29 a) and the (2) Ashluslay (Fig. 29 b), use, as we have mentioned, *sandals* (Map. 17). These are very practical in the hills, where the soil is stony, and in woods where there are many prickly plants. They are less serviceable in the tropical rainy woods, where they are always getting wet and soon become soft and rot. A C 291

In the parts visited by me, the following additional tribes wear sandals: (19) Aymara (5) Chané (4) Chiriguano (6) Mataco (18) Quichua (3) Tapiete (7) Toba and (93) Tsirakua.

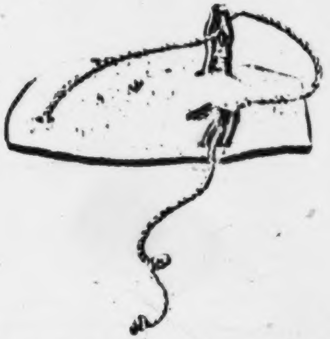

Fig. 29. Sandal of leather. Choroti. G. M. (D. 1189). 1/2.

Among all these tribes the sandals are of leather, except among the Tsirakua, who occasionally have wooden ones. 500 These Indians also have a curious fastening to the sandal, differing from the usual kind[2]). In the graves on the Peruv-

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[1]) «Porque con ella y hilo de lo mismo que son los vestidos, las cosen y remiendan, porque no usan para remendar añadir parte de su paño sobre la rotura, como nosotros, sino que van zurciendo con un hilo de la misma lana lo que de la urdiembre se ha gastado.»

Cobo, vol. 4. p. 163.

[2]) See «Indianerleben» fig. 138.

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2: Nordenskiöld E-5 (1908-1909)1919

SK6 Choroti

Ashluslay SK5

ODD ian coast numerous sandals have been found, thus at (A) Ancon[1]) and at (B) Arica[2]), as well as at other places (K)[3]).

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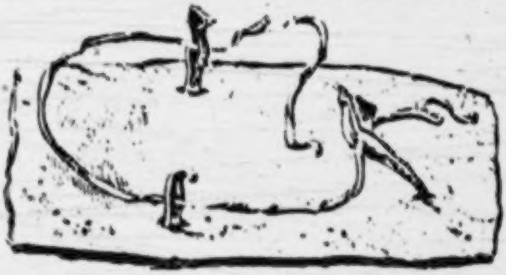

Fig. 29 b. Sandal of leather. Ashluslay. R. M. (A. 1020). 4/5.

Sandals have also been found in the (D) Puna de Jujuy[4]) in Argentina.

PIETSCHMANN[5]) quotes some references to the occurrence of the sandal in old Peru. BOMAN mentions sandals from the (E) Diaguita[6]), following ROMERO and MONROY.

MERCADO DE PEÑALOSA gives them as occurring among the (19) Pacaje[7]).

Sandals were probably worn throughout the Inca realm. On the other hand the Indians in Columbia seem to have gone barefooted as a rule at the time of the Discovery. The only reference I can find to the use of foot-gear there at that time, occurs in an account of the first voyage of Pizarro and Almagro along the west coast of Columbia (01). The author[8]) says that the Indians protected their feet by means of sandals or slippers of bark when walking on the glowing soil.

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[1]) REISS and STÜBEL, Vol. 3, Pl. 83, figs. 16 and 17.

[2]) UHLE (1), Vol. 1, Pl. 25, fig. 26. The primitive fishermen at Arica had no sandals. (UHLE (6), p. 11).

[3]) WIENER, p. 677.

[4]) BOMAN, p. 593. LEHMAN-NITSCHE (1) Pl. V, B, 11.

[5]) p. 148.

[6]) p. 141.

[7]) p. 59.

[8]) SAMANOS, 194.

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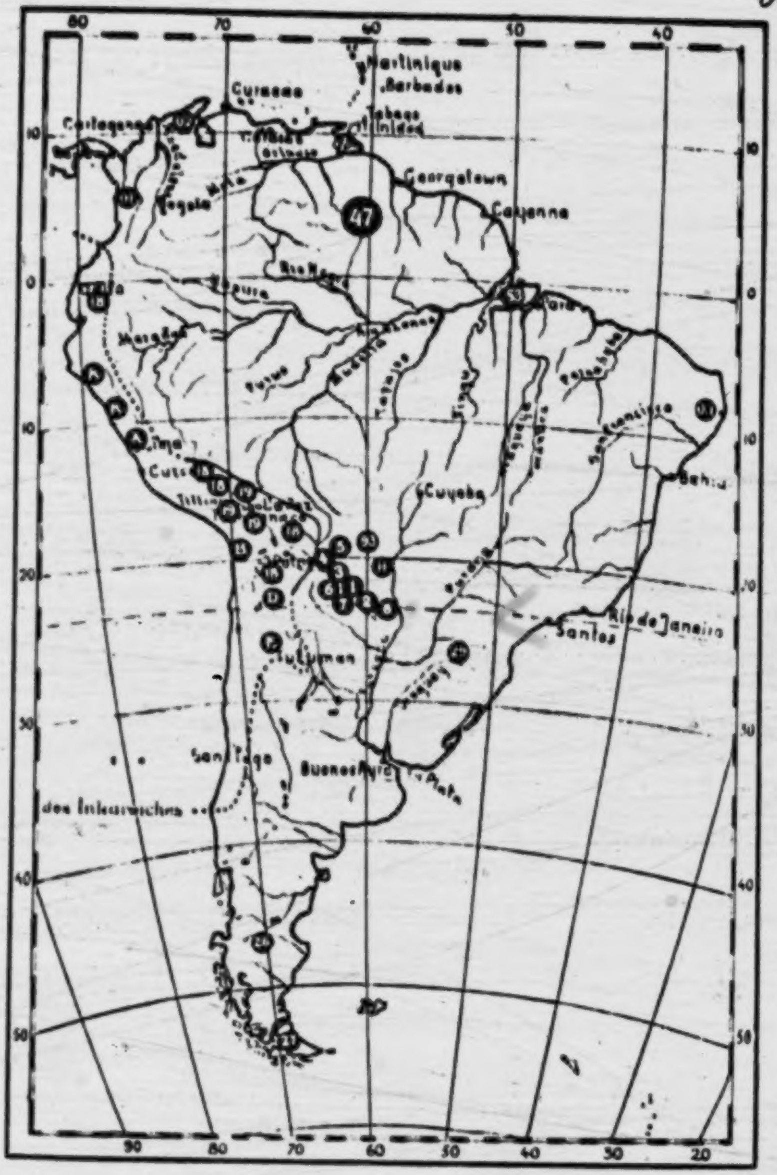
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Map 17. The Distribution of Foot-gear.

290 In modern times sandals are mentioned by **Hawtrey**[1]) for the (8) Lengua, by **Boggiani**[2]) for the (11) Chamacoco, by **Boman**[3]) from the (D) Puna de Jujuy, by **Rivet**[4]) for the (18) Quichua Indians, Riobamba, Ecuador, by Im Thurn and others from (47) Brit. Guayana. The Guayana sandals are made of the leaf-stalk of a palm, *Mauritia flexuosa*. The fastening is somewhat different from that used in the Chaco.

Of the tribes visited by **Bolinder** on his journey in Columbia, only the civilized (02) Busintana and the (02) Ijca had sandals[5]). They consisted of ox-hide.

According to **Dobrizhoffer**[6]) the Abipone did not wear sandals, nor did they seem to have been used originally by the Araucanians[7]).

According to **Ambrosetti**[8]) the Caingáng, when in hostile country, wear a curious kind of sandals, which are of such a shape that it is difficult to make out in which direction the tracks run.

It is notable that the Indians living on the islands at the mouth of the Amazon had leather sandals in the middle of the 16th century. This is stated of them by those who have described the voyage of Aguirres the Tyrant[9]). But it is curious that the Indians in these swampy parts should have worn leather sandals, which would soon have rotted away in a damp climate. When I passed from the mountains into the primeval forests of the border country of Peru and Bolivia in 1904—1905, my carriers had to take off their sandals at every brook we had to wade through, to keep them from rotting. 080

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[1]) p. 282.

[2]) (1) p. 51.

[3]) p. 115.

[4]) (2) p. 50.

[5]) **Bolinder** (1), p. 64. G. M.

[6]) Vol. 2. p. 120.

[7]) **Latcham** (1), p. 336.

[8]) (1) p. 332 »Calzado no usan, pero cuando van en marcha, ó á alguna sorpresa, ó no quieren que se les siga el rastro, acostumbran ponerse, bajo la planta del pié, un atado de paja, cuyas puntas doblan para arriba de modo que no puede saberse cual es la direccion de la marcha que llevan, puesto que, tanto de uno como de otro lado, el rastro es igual.»

[9]) »La gente, desnuda y bien dispuesta; traen en la planta de los pies unas suelas de cuero de venado, y otros de anta, atadas ó liádas por encima del empeine del pie con un lazo ó ligadura de hilo de algodon, de la suerte que se pintan algunas figuras antiguas y de la manera que hoy las traen algunos indios del Pirú.» **Ortiguera**, p. 373. See also **Jornada de Omagua y Dorado**, p. 110.

Also the (23) Tapuya, but not the Tupinambá on the Brazilian coast, had sandals. Of the former MARCGRAV[1]) writes: »Loco calceorum nostratium, è certo cortice *Curagua* ipsis vocato, factis utuntur atque illos vocant *Miapapacaba*, Lusitani autem *Alpargatas.*» Of Indians in the same region FREI VITAL DE FRESCAROLO[2]) mentions sandals out of Caraguatá.

It is probable that the Indians in the Chaco originally learnt the use of sandals in their present form from the culture zone in the west. Foot-gear in general, however, to judge from the wide-spread and partly sporadic use of it, seems to be a very old cultural element in S. America. Outside the old cultural zone in the west, where slippers were also worn, any other foot-gear than sandals is rare. In the form of very primitive leather shoes we only find it among the (26) Patagonians[3]) and the (27) Ona[4]).

In the swampy districts the Ashluslay wore a kind of *stockings*, made in a curious way, as a protection against the greedy and dangerous palometa fish (the pompano). I have not seen such stockings elsewhere, and have only seen a mention of them in a description from Venezuela, as early as the 16th century, SIMON[5]) mentioning them from the voy- [29L 136

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[1]) p. 271.

[2]) p. 115. »Alparcatas de cravatá, calçado com que andão nos matos.»

[3]) PIGAFETTA, p. 12.

[4]) GALLARDO, p. 155.

[5]) ». . lleuando algunos de los soldados algunas calças enteras de red con muy gruesos nudos, que se hallaron entre el demas pillaxe de aquella gente, que vsaban dellas en aquella Prouincia, para entrar a pescar en las

Ashluslay SK5
Mataco SI7

000 age of Herrera. The Spaniards must have thought them peculiar, since Simon, who as a rule does not go into the details of ethnographical objects, decribes them minutely. It was on the R. Orinoco that the Indians wore them. They must also have been in use in other parts than Venezuela and the Chaco, though not noticed there, since it is improbable that the Indians in the Chaco and in Venezuela should have independently hit upon the use of such stockings.

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The Ashluslay and the Choroti wear *girdles*, now made of wool, now of leather.

The woven girdles in S. America belong to the westerly cultural elements. We find them in old graves on the Peruvian coast[1]). I have seen them among the Aymara, Quichua, Chiriguano, Chané, Mataco[2]), Choroti, Ashluslay, Toba, and Tapiete. They are known from the

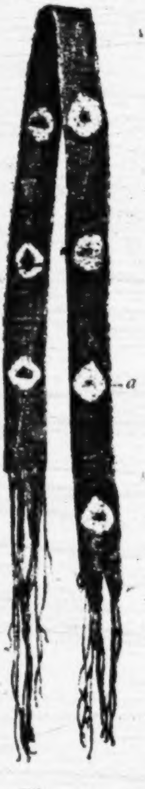

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Fig. 30. Girdle coloured by »tying round»-dyeing. Mataco. R. M. (M. 50). 1/10.

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cienagas con que se defendian de vnos peces que los Españoles llamaron Caribes por ser tan fieros, y atreuidos q̄ hasen presa en todo lo que topan dentro del agua: y assiendo destos nudos quando entrauan los Indios a pescar, quedaua libre la carne de sus vocas. Simon, p. 224.

[1]) Uhle (2).

[2]) The Mataco Indians occasionally dye the woven girdle in a way that is of anthropo-geographical interest. They use the »tying round» method of dyeing, which is as follows: Those parts of the material that are to remain undyed, are firmly bound round, whereupon the material is dipped in the dye. The parts »tied round» remain undyed (Fig. 30 a) This method was in use on the Peruvian coast, as well as in the Chaco. A piece of material dyed in this way was brought home by Stolpe (R. M.) It was presumably found at Ancon. The same method is known to the Quichua-Mestizos on Mt. Calilegua in N. Argentina, and has thus, as far as can be judged, reached the Chaco from the mountain culture.

Araucanians[1], Abipone[2] Ijca[3], Goajiro[4], Lengua[5], Caingua[6], the Indians in Quito, Riobamba and Angamarca, Ecuador, Popayan in Columbia and Chachapoyas in Peru[7]. They are worn everywhere in conjunction with the dress, and for the most part only by the men.

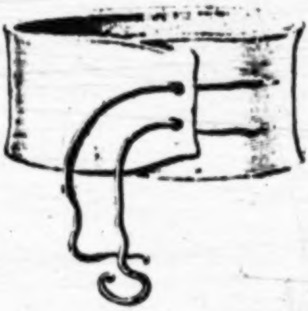

Fig. 31 a. Leather girdle. Choroti. G. M. (D. 1176). 1/4.

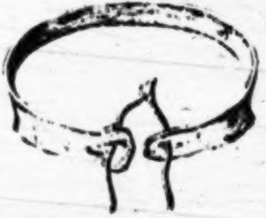

Fig. 31 b. Leather girdle. Ashluslay. G. M. (C. 7). 1/4.

Leather girdles are to be found among the Mataco, Choroti (fig. 31a), Toba, Tapiete, Ashluslay, Chiriguano and Chané.

These girdles are sometimes worn on the body, even when it is otherwise uncovered. Of the Chaco tribes here mentioned, at least the Choroti, Mataco and Ashluslay occasionally have fringed leather girdles covering the privy parts.

The Choroti and the Ashluslay (Fig. 31 b) sometimes wear a leather girdle round the chest.

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[1] Outes and Bruch (5), fig. 98.
[2] Dobrizhoffer, Vol. 2, p. 129.
[3] Bolinder (4) p. 60.
[4] Pleyte, p. 245.
[5] Hawtrey, p. 283.
[6] Outes and Bruch (5) p. 95.
[7] Uhle (1) Vol. 2, Pl. 11—12.

Ashluslay SK5
Mataco SI7

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The leather girdle has, as is natural, a southern distribution. Thus, we find it among the Lengua[1]).

The Choroti, Mataco and Ashluslay men always have a little bag, in which they carry their pipe, tobacco, small tools, trinkets, etc. This custom is to be found among many tribes throughout S. America, though by no means among all.

Other tribes, again, though they have little bags of different kinds, do not always carry them, as the Choroti, Mataco and Ashluslay do, for which reason I assume that this custom, too, reached the Chaco under the cultural influence of the tribes in the Andes.

Of the following tribes whom I visited on my travels, the men always carry a little bag: Ashluslay, Aymara, Chimane, Choroti, Mataco, Quichua, Tapiete and Toba.

The Choroti and the Ashluslay have several forms of bags. As a rule these are made of caraguatá. The bags of the Choroti are occasionally made of wool.

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[1]) HAWTREY, p. 282.

XVII.

Objects for deforming the Body.

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The Chaco tribes here dealt with wear no labrets, do not bore through the nasal septum, do not deform the head, and do not strap their calves in an unnatural way. The (1) Choroti, (2) Ashluslay and some (9C) Mataco Indians (Mataco-Guisnay), however, bore the flap of the ear, all the men, and some of the women, wearing blocks of wood or pieces of cane in, it so that the flap surrounds the objects like the tyre of a bicycle wheel.

000

Ear appendages (Map 18) of the kind here in question are not worn by any other Indian tribe I visited. Some of the Toba (X 8) wear them, but I did not visit this section. Several of the tribes known to me, however, wear rings, small blocks of wood or teeth etc. in their ears.

The custom of forcing the flap of the ear round a block of wood or the like, was universal in old (18) Peru[1]. The Indian chiefs in the Inca kingdom, who wore these ear-blocks, were called »orejones» by the Spaniards. Numerous ear appendages of this kind[2], as well as earthenware vessels with figures of Indians thus adorned[3], have been found on the Peruvian coast (A, K). For the rest, they are found in Brazil among the Botocudo (45)[4], among the (67) Suyá[5],-

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[1] COBO, Vol. 4, p. 159.

[2] BAESSLER, Pl. 27, fig. 399—403; REISS and STUEBEL, Vol. 3, Pl. 78.

[3] Also in (J) Tiahuanaco. POSNANSKY.

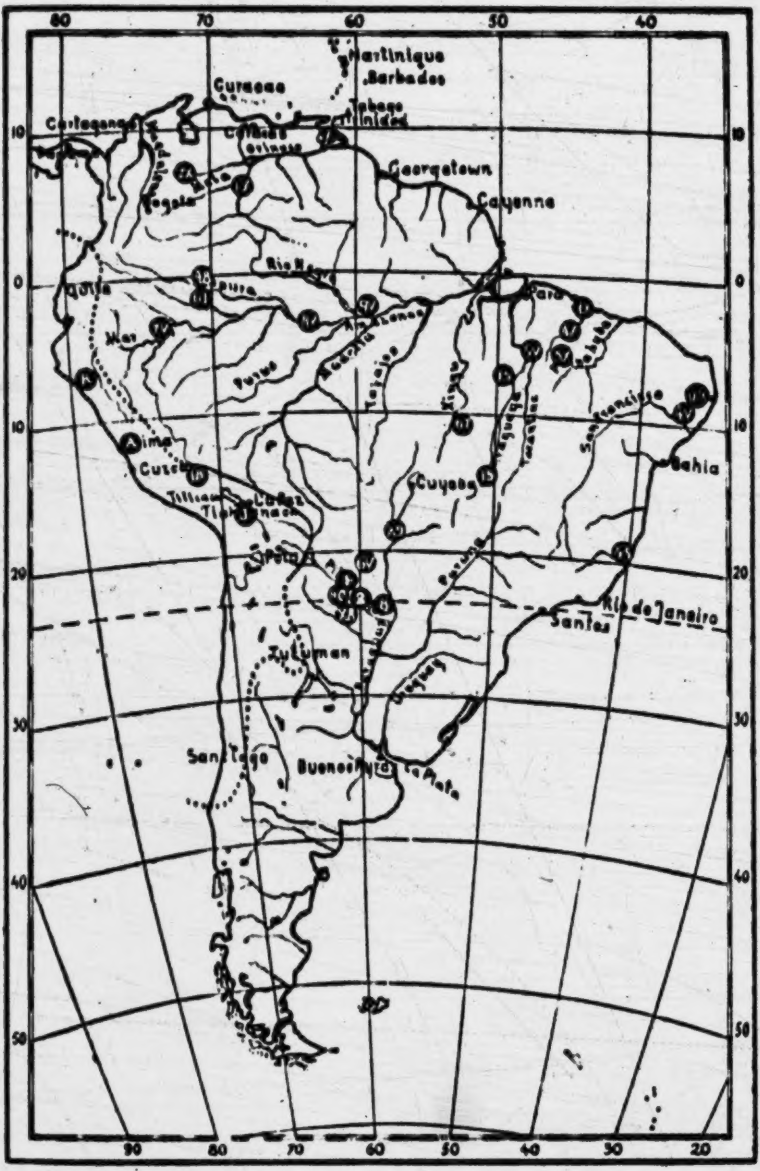
[4] WIED, Vol. 2, p. 5.

[5] V. D. STEINEN (2), p. 207.

301 among (4 x) Gês-tribes in Maranhão[1]), among the (5 x) Canella[2]), (15) Kayapó[3]), (3 x) Miarigois[4]), (4 V) Garanhuns[5]), (93) Tapuya[6]), (5 V) Apinagês[7]), (6 V) Guaná[8]), (8) Lengua[9]), in the extreme N. of Peru among the (7 V) Orejones[10]), Indians (X 9) on the upper R. Paraguay, Isla de los Orejones[11]), (61) Boro and others in the river basin of the R. Içá and R. Yapurá[12]), among the (7 V) Yamaco[13]) (7 V) Zameo y Masamae[14]), (8 V) Curuzirari[15]), (9 V) Aroaqui[16]), (IX) Cavére, Maipure and Avane on the R. Orinoco[17]), (2 X) Guamo[18]), (48) Uitóto[19]), and (48) Kauyári on the middle Apaporis[20]).

This ear appendage has, in fact, a most curious distribution. We find it among the cultured Indians of western S. America, in the Chaco, and among the Gês-people. It belongs to the not very restricted number of cultural elements which the mountain culture, the Chaco tribes, and the primitive Gês-people have in common. The custom of fastening blocks of wood in the ears, still occurs to-day on some of the north-western tributaries of the Amazon. It was once widely extended in this part of S. America.

[1]) RIBEIRO, p. 192.
[2]) KISSENBERTH (1) p. 46.
[3]) KRAUSE, p. 98.
[4]) YVES D'EVREUX, p. 40.
[5]) Prov. Pernambuco, MARTIUS, p. 349
[6]) PISO et MARCGRAV, p. 271.
[7]) CASTELNAU, Vol. p. 28.
[8]) COMINGES, p. 211.
[9]) HAWTREY, p. 283; AZARA (2), p. 300.
[10]) OSCULATI, p. 211; RAIMONDI, p. 605; POEPPIG, Vol. 2, p. 415.
[11]) NUÑEZ CABEZA de VACA, Vol. 1, p. 289.
[12]) WHIFFEN, p. 83.
[13]) VEIGL. p. 72.
[14]) CHANTRE Y HERRERA, p. 69.
[15]) ACUÑA, p. 103.
[16]) MARTIUS, p. 689.
[17]) GUMILLA, Vol. 1, p. 142; Gilij, Vol. 2, p. 53.
[18]) GUMILLA Vol. 1, p. 143.
[19]) KOCH-GRÜNBERG (2) Vol. 2, p. 302.
[20]) Ibid.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Map 18. Distribution of the Ear Blocks.

XVIII.

Tattooing (Map 19).

A C 304 We distinguish between two kinds of tattooing, scar-tattooing and ordinary tattooing of incisions filled with colour.

It is only the latter kind that is practised in the Chaco.

In many parts of S. America the Indians paint their skins with the cauterising juice of the »Genipa» fruit.

This colour, which is bluish violet, lasts for several days, and it is probable that travellers have sometimes mistaken Genipa-painting for tattooing.

I have seen real tattooing among the (2) Ashluslay, (1) Choroti, (6) Mataco, (7) Toba[1]), (3) Tapiete and (4) Chiriguano[2]), i. e., wherever genipa is wanting.

000 In the whole of N.E.Bolivia and the adjoining districts of Peru and Brazil I have seen no tattooed Indians.

As far as I know, painting the face and body with genipa is practised by the Yuracáre, Huanyam, Pauserna, Cavina, Atsahuaca and Tuyoneiri. Among no tribe have I seen both real tattooing (puncture tattooing) and genipa painting.

PATER SCHMIDT[3]) speaks of tattooing among these tribes, in addition to those mentioned above: Indians on the Peruvian coast, (V 6) Caraques (Ecuador), (7 x) Cueva[4]), (8 x) Warrau (55) True Caribs, (48) Desana, (9 x) Passé

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[1]) See also DUCCI, p. 10.

[2]) Very rarely.

[3]) p. 1084.

[4]) Wrongly marked on Pater SCHMIDTS map.

(60) Apiacá, (20) Paressi, (56) Mundrucú, (13) Karajá, (85) Juri, (28) Kustenaú, (28) Bakaïrí[1], (52) Mocovi, (82) Arawak (Dutch Guayana), (47) Arecuna, (40) Guarayú, (12) Mbayá[2], Tapirapé[3], and (44) Charrua. 000

Boggiani[4] considers that the mummies found on the Peruvian coast, and which were held to be tattooed, are not tattooed but are painted with caustic genipa juice. Uhle, however, has informed me by letter that on the same coast he found implements that were undoubtedly used for tattooing. I can add the following: (1 A) Timbú[5]) (?), (3V.) Querandi[6], (17) Abipone[7], (2 A) Minuane[8], (X 4) Payaguá[9], (8) Lengua[10] (mostly women), (38) Tupinambá and other Indians in Maranháo[11], (38) Tupinambá[12], (25) Mojo[13], (3 A) Remo[14], (4 A) Tanaré[15], (86) Yagua[16], (8 A) Mayoruna[17], (1 B) Ticuna[18], (61) Menimehe and Boro, R. Yapurá[19], (5 A) Indians in Provincia de los Tisnados,

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[1] Only occasionally.

[2] Pater Schmidt also gives the Kaduveo. This is the same tribe as the Mbayá. See also Sánchez Labrador, Vol. 1, p. 285 and Colini, (1) p. 308.

[3] Probably not tattooed.

[4] Boggiani (3).

[5] Schmidel, p. 158.

[6] Ibid, p. 163, Karendos—Querandi.

[7] Dobrizhoffer, Vol. 2, p. 19.

[8] Azara (1), Vol. 2. p. 33.

[9] Rengger, p. 130; Azara (1), Vol. 2, p. 128.

[10] Hawtrey, p. 283.

[11] Yves d'Evreux, p. 44.

[12] Lery, p. 103.

[13] Eder, p. 216.

[14] According to Raimondi, this is the only tribe on the R. Ucayali that tattooes. Raimondi, p. 608.

[15] Stegelman, p. 116. The men.

[16] Osculati, p. 209.

[17] Veigl, p. 88; Chantre y Herrera, p. 65.

[18] Ibid. p. 97.

[19] Whiffen, p. 86– 87.

302 Venezuela[1]), (31) Trio[2]), (6 A) several tribes near L. Maracaibo[3]), (7 A) Achagua on the R. Orinoco[4], (28) Mehinakú, Waurá and Yaulapiti, on the R. Xingú[5]), Ona[6]), (2 B) Ortanese[7]) and (3 B) Guaxarapo[8]) on the upper R. Paraguay, (X) Yurúna on the R. Xingú[9]), (5 B) Pariri[10]) between the R. Xingú and R. Araguaya, (21) Cainguá[11]), (47) Patamona[12]), (47) Ackawoi[12]) (47) Macusi[12]) and Patagonians[13].

To judge from the distribution of tattooing, it does not seem to have reached the Chaco from the mountain culture, where it was probably not practised in Inca times. No writer speaks of it from the days of the conquest. It appears to belong to the cultural elements with a predominently northern and eastern distribution. Tattooing is not practised by the Gês-tribes, nor on the R. Purús, nor among the Jivaro.

Tattooing is of course one of those cultural elements that are quite independent of the natural conditions in which a tribe lives.

Tattooing is very widely diffused, and I assume that it could easily have originated in different places. Karl v. d. Steinen has pointed out how easily a wound can be filled with soot and become a form of tattooing (see also Cojazzi, p. 43).

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[1] Caulin, p. 150.
[2] Crevaux, p. 280. (Very rare).
[3] Oviedo y Valdés, Vol. 2, p. 272, 275.
[4] Gumilla, Vol. 1, p. 145. Cassani after Brinton p. 280.
[5] v. d. Steinen (3), p. 180.
[6] Gallardo, p. 148; Cojazzi, p. 43.
[7] Nuñez Cabeza de Vaca. Vol. 1. p. 208. (16th. century)
[8] Ibid. p. 270.
[9] Krause, p. 590 (very rarely)
[10] Nimuendajú-Unkel, (1) p. 624.
[11] Azara (1), Vol. 2, p. 63.
[12] Thulin, orally communicated.
[13] Musters, p. 177 (not on the map).

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6

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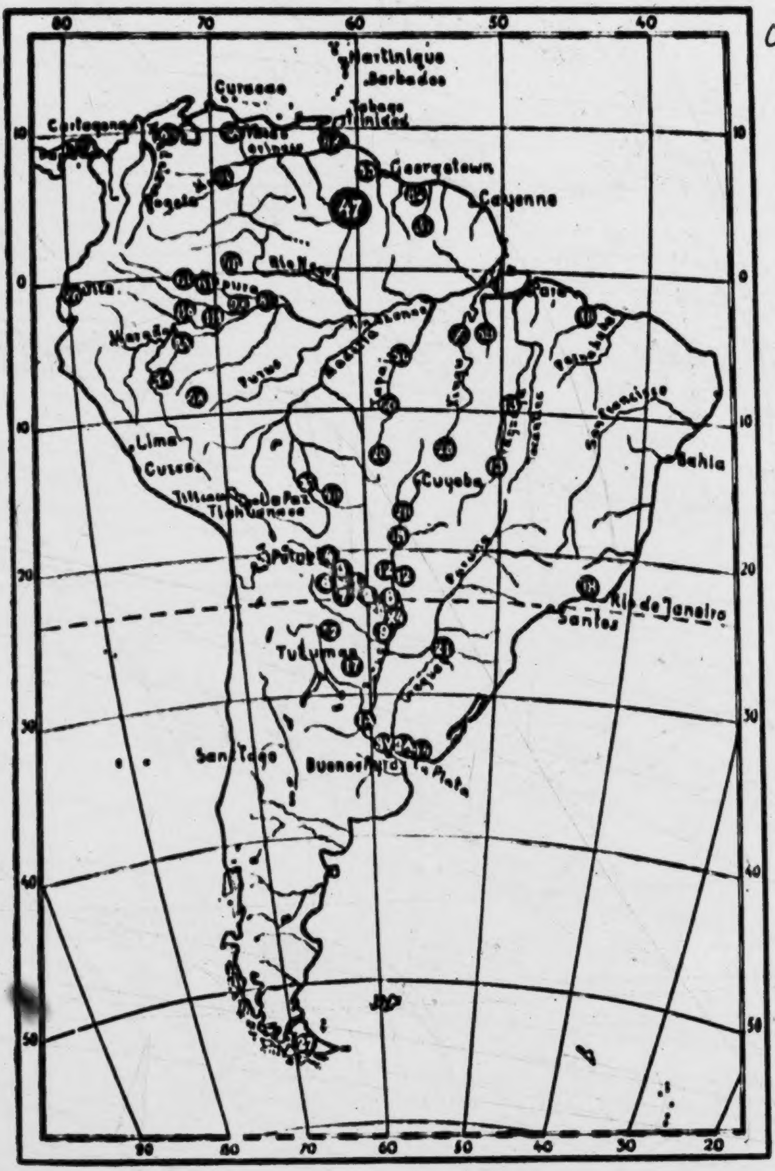
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Map 19. The Distribution of Tattooing in Post-Columbian time.

XIX.

Trinkets and Knick-knacks.

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The Choroti and the Ashluslay make use of a number of trinkets[1]) of various kinds, made of feathers, shells, etc.

Snail shell beads, made of the shell of the Borus oblongus, are used in the Chaco for necklaces and other ornaments. I have seen these beads among the Choroti, Mataco, Ashluslay, Toba, Tapiete, Chiriguano, (rarely) and Huari; **Lery**[2]) **Soares de Sousa**[3]) and **Staden**[4]) mention them from the Tupinambá, **Hawtrey**[5]) from the Lengua, **Azara**[6]) from the Payaguá, **Sánchez-Labrador**[7]) from the Mbayá, **Cominges**[8]) from the Guaná, **v. d. Steinen**[9]) from the Bakaïrí and the Nahuquá. **Medina**[10]) following **Najera**, relates that the Araucanians had them at first. **Castillo**[11]) mentions them from the Mojo **Gumilla**[12]) from

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[1]) I can only mention the most important here.

[2]) p. 99.

[3]) p. 284.

[4]) Vol. 2, p. (16).

[5]) p. 282.

[6]) (1). p. 127.

[7]) Vol. 1 p. 182.

[8]) p. 306.

[9]) (3) p. 182.

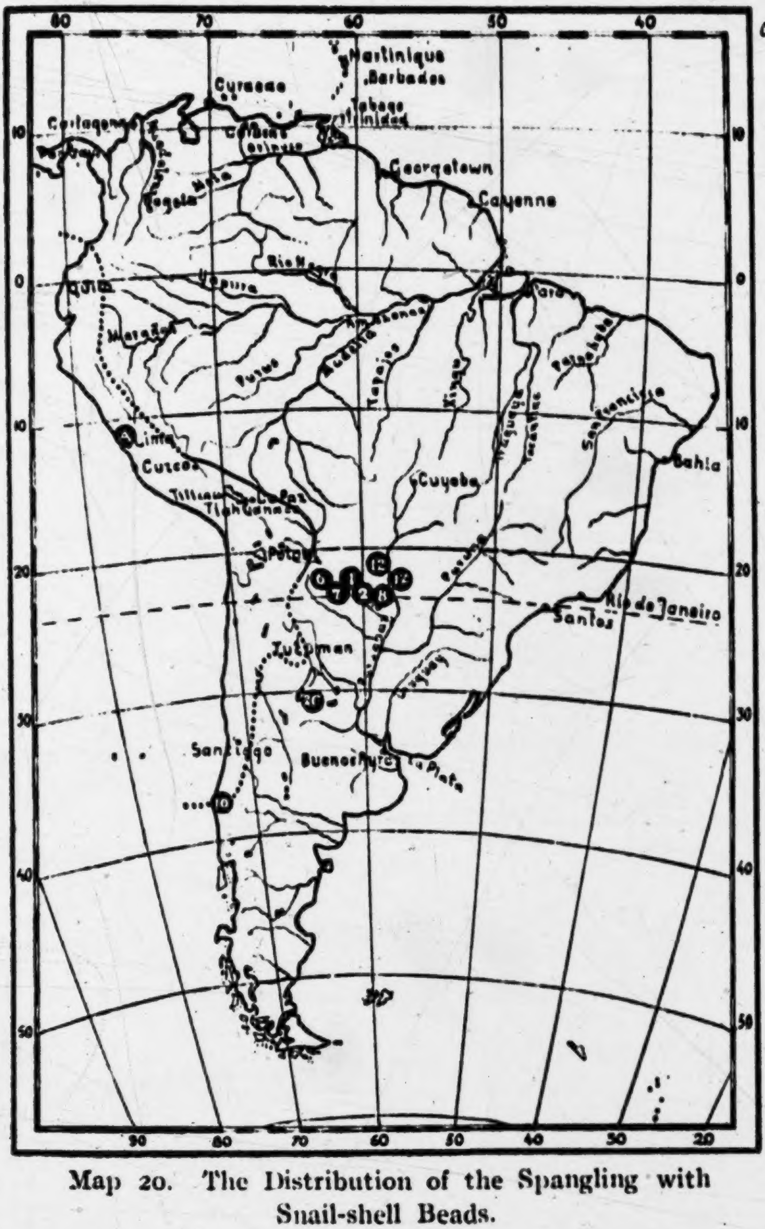
[10]) p. 171.

[11]) p. 325.

«Sartas de lentejuelas hechas de caracol blanco, mayores que las ordinarias en el cuello».

[12]) Vol. 1. p. 141.

[text continues on p.126]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Map 20. The Distribution of the Spangling with Snail-shell Beads.

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301 the Indians on the R. Orinoco, **Birt**[1]) and **Barrere**[2]) from the Galibi.[3])

000 **Rivet**[4]) has published a résumé of the finds of these snail shell beads revealed by archaeological excavations in S. America. He mentions finds from a number of places in Columbia, Ecuador, Venezuela, Peru, Bolivia, Argentina and Chile. For the details I refer to his work.

To **Rivet**'s resumé I can add Caipipendi, Bolivia, where I found innumerable snail shell beads in the graves.

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301 The Chaco Indians here dealt with, the Choroti and Ashluslay sometimes sew these beads onto material (Fig. 32) as *spangles* (Map 20). I have seen these spangles, moreover, among the Mataco and Toba but not among any other tribe visited by me.

060 The same custom was known on the Coast (A) of Peru[5]). **Medina**[6]) following **Ercilla** mentions it from the (10) Araucanians, **Cabrera**[7]) from the «Juries».

The (8) Lengua Indians also sew snail shell beads onto material.[8]) The (12) Mbayá seem to have done so to a still greater extent than is now customary in the Chaco[9]). Spangling probably reached the Chaco from the culture zone in the west.

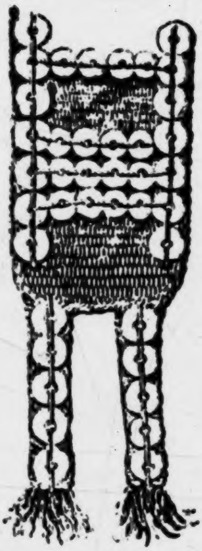

Fig. 32. Piece of a frontlet with spangles of snail shell beads. Choroti. G. M. (D. 96) 1/2.

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[1]) p. 353.

[2]) p. 194.

[3]) The résumé could be supplemented to a very great extent by going through the unpublished collections in the large museums. I therefore do not include a map of the geographical distribution of the snail beads.

[4]) (4), p. 259.

[5]) **Reiss and Stübel**, Vol. 3. Pl. 79.

[6]) p. 171.

[7]) p. 140.

[8]) **Grubb** p. 70.

[9]) **Sánchez Labrador**, Vol. 1. p. 282.

Ashluslay SK5

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These round beads are cleverly threaded (Fig. 33).

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[284]

The Ashluslay and the Choroti also wear necklaces of square snail shell beads (Fig. 34) with two holes in each.

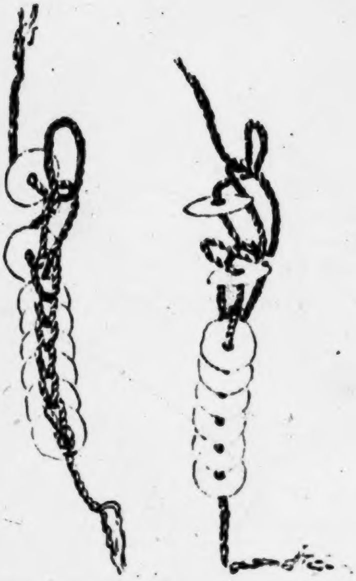

Fig. 33. Part of a necklace of snail shell beads. Choroti G. M. (D. 90) ¹/₁.

The snail shell bead necklaces are the kind most characteristic of the Indians here dealt with, but the Ashluslay and Choroti have quite a number of other necklaces, of seed grain, teeth, pieces of straw and leaves, glass beads, etc. Most Indians, save the Fuegians, probably also wear perforated teeth as ornaments. I have some in my collections from the Choroti, Ashluslay, Atsahuaca, Chacobo, Cháma. Guarayú (Pauserna), Huanyam, Huari, Mataco, Tambopata-Guarayo, Yamiaca and Yuracáre. Perforated teeth are here included among the cultural elements about whose origin I know nothing certain. The same is true of trinkets of seeds, pieces of straw, etc. At present the geographical distribution of these objects cannot be determined in a satisfactory manner. This is the more impossible without going through the unpublished collections of all the large museums.

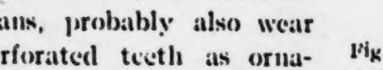

Fig. 34. Piece of a necklace of snail shell beads. Choroti G. M. (D. 70) ¹/₁.

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The Choroti and the Ashluslay Indians often wear a broad woven band tied round the head and ornamented, occasionally, with fea-

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thers, not rarely with snail shell beads. The custom of wearing these *frontlets* undoubtedly derives from the mountain culture.[1]) (Map 21) In the Inca realm the frontlet was a token of honour.[2])

I have seen these frontlets among the (1) Choroti, (6) Mataco, (7) Toba, (3) Tapiete, (2) Ashluslay, (4) Chiriguano and (5) Chané, but among no Indians in N.E.Bolivia. The woven frontlet is, moreover, known from the (17) Abipone[3]) (26) Patagonians[4]) (10) Araucanians[5]) (8) Lengua[6]) (21) Cainguá[7]) and (6 V) Guaná[8]) Numerous frontlets have been found on the coast of Peru (A)[9]).

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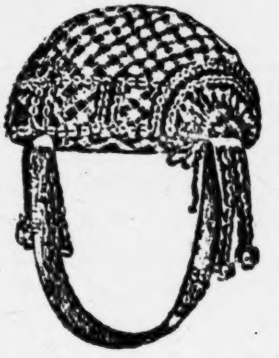

Fig. 35. Hairnet. Ashluslay. G. M. (B. 94). 1/4.

The idea underlying the beautiful hair-nets decorated with snail shell beads (Fig. 35) which are sometimes seen among the Choroti and Ashluslay, probably also reached these Indians from the culture zone in the west, where they had hair-nets[10]) as well as the same

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[1]) Cobo Vol. 4. p. 162; Uhle (2) p. 30.

[2]) Pelleschi compares the frontlets of the Chaco Indians with those that were used by the Incas. His explanation, however, of the occurrence of this cultural element in the Chaco, is not that the Indians in the Chaco learnt the use of the woven frontlet from the Incas, but runs as follows: «Now this custom must have pre-existed among some at least of the primitive peoples of the Empire, since we find it here in the Chaco, and we attribute to the Incas merely the law as to its use; their system being to regulate every person and everything by laws.» p. 24.

[3]) Dobrizhoffer, Vol. 2. p. 130.

[4]) Outes (3). p. 254; Falkner, p. 111.

[5]) Medina p. 168.

[6]) Grubb, p. 70.

[7]) Outes and Bruch (5) p. 94. fig. 77.

[8]) Cominges, 306.

[9]) Reiss and Stübel, Vol. 3. Pl. 75.

[10]) G. M. (16. 9. 78); Reiss and Stübel, Vol. 3. Pl. 30 fig. 2, 9 and. 10.

[text continues on p. 130]

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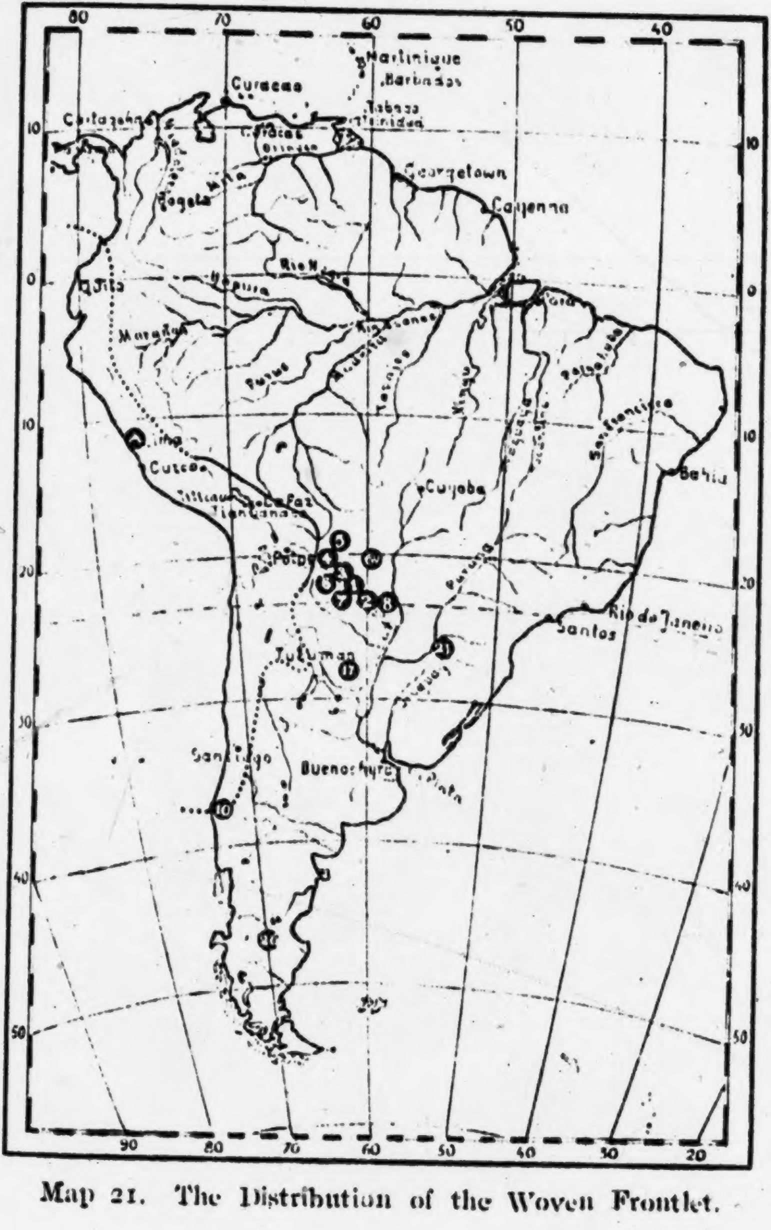
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Map 21. The Distribution of the Woven Frontlet.

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technique in knitting as is seen in the hairnets in the Chaco[1]) on the Peruvian coast. The Lengua Indians have very similar hair-nets to those of the Choroti and Ashluslay[2]).

Radin[3]) mentions hair-nets like caps from the Suyá, Yurúna and Karajá. They are also found among the Mataco[4]).

The use of *tassels* (Fig. 36) on cords of various kinds is clearly a custom that came to the Chaco from the culture zone in the west. Within the area of my investigations I found these tassels among the Choroti, Ashluslay, Mataco, Toba, Chiriguano, Chané, Aymara and Quichua (Fig. 37) but among no tribe on the plain north of Sta. Cruz de la Sierra. Tassels are common on the textile fabrics found on the Peruvian coast[5]).

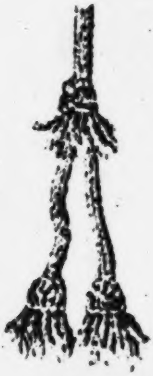

Fig. 36. Hair-band with tassels. Ashluslay. R. M. (A. 5). 1/2.

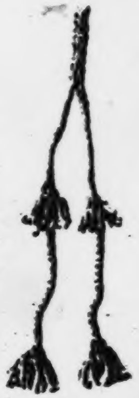

Fig. 37. Hair-band with tassels. Quichua mestizos. Calilegua. N. Argentina. R. M. (u. 12). 1/2.

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[1]) G. M. (P. 1.)

[2]) Hawtrey, p. 282.

[3]) p. 929.

[4]) R. M. (03.1.1.12), R. M. (03.1.1.13).

[5]) See, e. g. Reiss and Stübel, Vol. 3, Pl. 75, fig. 4, 5, 9.

2: Nordenskiöld E-5 (1908-1909) 1919
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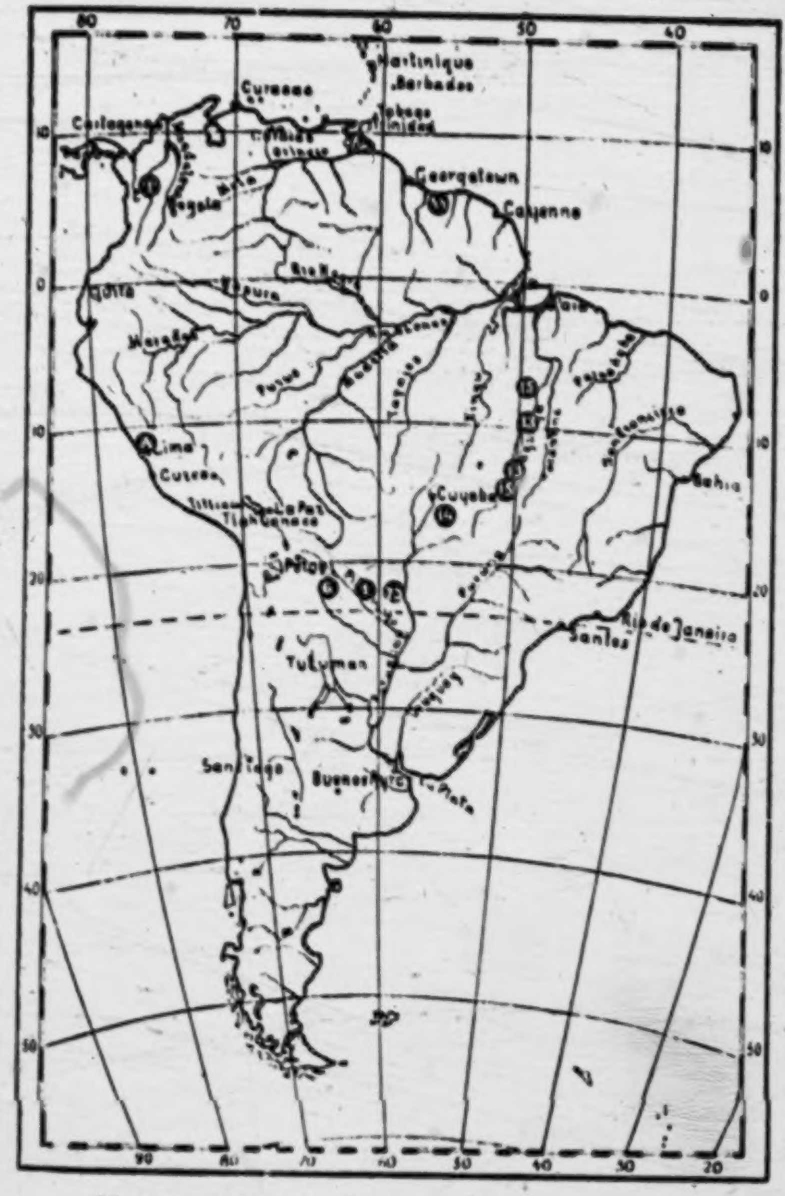
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Map 22. The Distribution of the Thread-cross.

Ashluslay SK5

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The tassels of the Ashluslay, here depicted, are similar to those used on their head-bands by the Quichua mestizos in the Calilegua Mountains of N. Argentina (Fig. 37).

The Choroti sometimes wear an ornament on the forehead[1] in the form of a *thread-cross* (Fig. 38, Map 22).

The distribution of the thread-cross throughout the world has been studied by FOY. From S. America he gives: (55) Arawaks (Guayana), (13) Karajá (15) Kayapó, (14) Bororó, (75) Angaité, (1) Choroti, (6), Mataco-Vejos, (A) Peruvian coast and (T) Antióquia in Columbia.

It is notable that the thread-cross commonly occurs on the Peruvian coast together with the so-called mummy packets. It probably had a religious significance there.

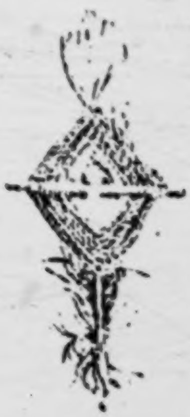

Fig. 38. Thread-cross, frontlet. Choroti, G. M. (D. 143). ¹/₄.

I will return later on to the question of the origin in the Chaco of the thread-cross.

The young men of the Choroti and Ashluslay use *plumes*, of course. Feathers are sometimes sewn to the frontlet. Ostrich feathers, with cuttings in them, are often sewn into the frontlet. SÁNCHEZ LABRADOR[2] speaks of them among the Mbayá. Round the instep and the upper arm the young men often wear plumes.

Plumes round the feet are very characteristic of the Indians in the Gran Chaco. Among others, HAWTREY[3] mentions them from the Lengua, and DUCCI[4] from the Toba.

The Ashluslay and the Choroti often wear a »brush» of hair or feathers stuck

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[1] The thread-cross was possibly not only an adornment among the Choroti, but also an amulet. However, as I heard nothing from the Indians to that effect, and as they have no compunction in selling thread-crosses, I look upon the thread-cross for the present as an ornament.

[2] Vol. 1. p. 214.

[3] p. 283.

[4] p. 10.

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in the frontlet. Similar adornments are customary among the Lengua[1]). I have not seen this species of adornment outside the Chaco.

The plumes seen in the Chaco differ considerably from those seen among the Indian tribes in N.E. Bolivia. Here we almost entirely miss the use of parrots feathers, and yet there are very gay-coloured little parrots in the Chaco. Ostrich feathers are chiefly used. As basket-weaving is unknown, the feathers are never mounted, as so often in Brazil, on woven basket-frames. But, on the other hand, it is customary, as we have observed, to fasten the feathers onto some material, a custom I never observed among the Indians of N.E. Bolivia.

The custom of fastening feathers onto material, appears to me to have originated in the mountain culture.

A common material for making ornaments in the Chaco, is hide and leather. In my collections from the Choroti and the Ashluslay, there are foot-ligaments, wristlets and armlets of leather, and caps and frontlets of hide, particularly jaguar skin. The leather armlets, as also often other adornments, such as the ear-blocks, are covered with pieces of tinplate.

SÁNCHEZ LABRADOR[2]) is of the opinion that this custom derives from Peru. The assertion is of interest, as this is the first time, as far as I know, that anyone has adduced ethnographical proofs of Inca influence in the Chaco.

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Few adornments are worn by the women in the Chaco. The Ashluslay women have armlets of strips of deer-skin. DUCCI[3]) speaks of these from the Toba, and, according to him, they are worn as amulets against lightning. I have not seen them elsewhere. The women occasionally wear necklaces of seed-grains.

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Both men and women wear *rings*, which consist of seg-

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[1]) HAWTREY, p. 282.

[2]) Vol. 2. p. 280.

[3]) p. 10.

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ments of the skin of lizard's tail. I have not seen such rings outside the Chaco. From books I only know them from the Karajá[1]) and the Šavajé[2]). I have not attempted to determine their geographical distribution. As in similar cases, this can only be done by working through the collections of all the large ethnographical museums. Few writers of books give any particulars about such unimportant objects.

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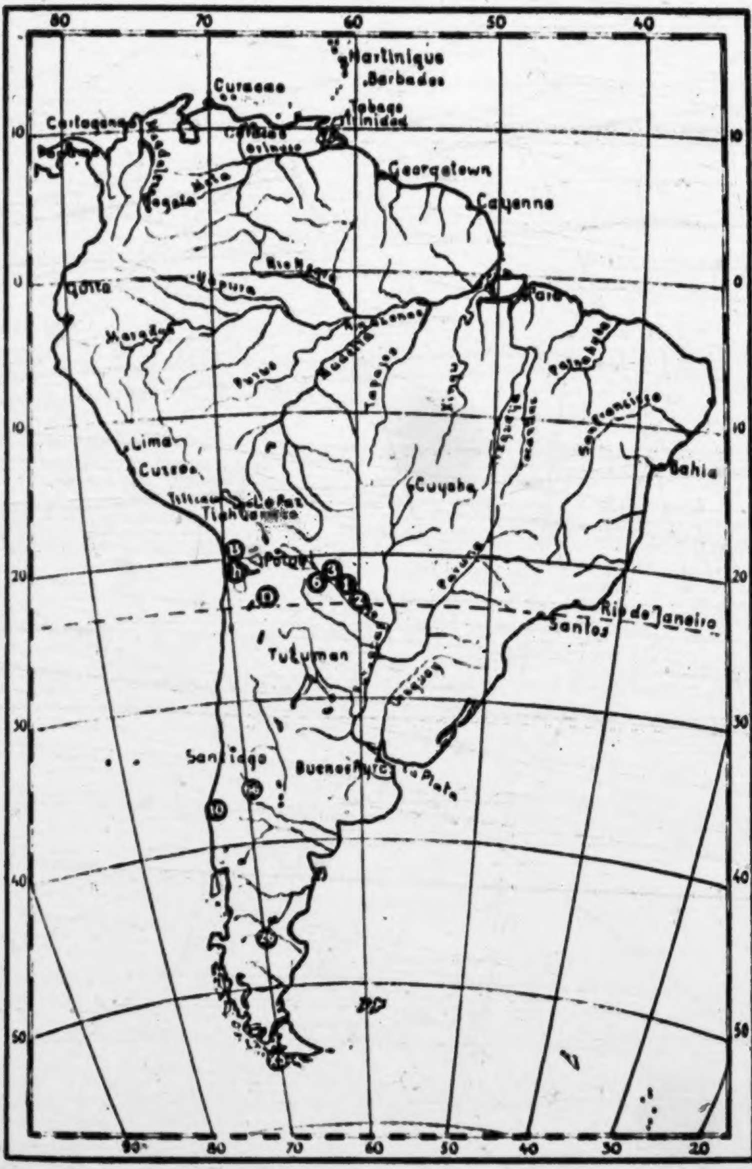
[1]) KRAUSE, p. 290

[2]) ibid. p. 358.


80
70
60
50
40
Martinique
Barbados
Curacao
Tobago
Trinidad
Cartagena
Orinoco
Georgetown
Cayenne
Bogota
Meta
Rio Negro
Quito
Yapura
Para
Marañon
Amazonas
Madeira
Purus
Tapajos
Xingu
Parnahyba
Araguaya
Tocantins
São Francisco
Lima
Cuzco
La Paz
Titicaca
Cuyaba
Bahia
Potosí
Paraná
Rio de Janeiro
Santos
Tucuman
Uruguay
Santiago
Buenos Ayres
La Plata
10
0
10
20
30
40
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6
90
80
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Map 23. Distribution of the Hairbrush.

XX.

Toilet articles.

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The Indians here dealt with are acquainted with the use of comb and brush. The use of the comb in S. America is very widespread; that of the hairbrush is much less so.

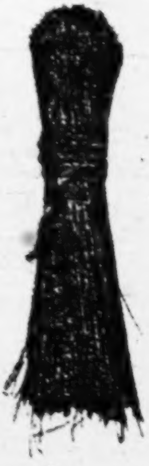

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Fig. 39. Hair-brush. Ashluslay, G. M. (A 701) 1/2.

I have in my collection *hairbrushes* (Fig. 39. Map 23) from the (6) Mataco, (1) Choroti, (2) Ashluslay and (3) Tapiete. They are, moreover, known among the (10) Araucanians[1]), (26) Patagonians[2]), (66) Peguenche[3]) and (X 5) Yahgan[4]).

Lehmann-Nitsche[5]) gives a drawing of an object from an excavation in the (D) Puna de Jujuy which probably depicts a hairbrush. The hairbrushes of the Choroti, Ashluslay and Mataco are made of ant-bear hair. The Tapiete Indians use brushes made sometimes of hair, sometimes of roots. Otherwise they are made of twigs or roots.

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[1]) Uhle (6). p. 13.

[2]) Outes and Bruch (5), p. 122, fig. 118.

[3]) Luis de la Cruz, p. 35: »Y advierto que sus peines es un manojo de boquis ó raicesillas delgadas de que nosotros usamos para barrer las casas.»

[4]) Outes and Bruch (5), p. 138, fig. 140.

[5]) (1), Pl. 4, F. 6.

It is an interesting fact that UHLE[1]) has found these hair-brushes in the very old excavations at (B) Arica. He has also discovered them in the oldest excavations at (h) Pisagua, while in the younger strata there, which he assigns to the time of the Tiahuanaco, he found combs. The hair-brush is evidently a very old mark of civilization in S. America, now spread more especially in the south. 500

LUIS DE LA CRUZ[2]) says that the Peguenche have no knowledge of combs. Nor have the Tehuelche any combs. On the other hand, among the above-mentioned tribes of the Chaco, the comb is used along with the hair-brush. The rest of the Indian tribes visited by me, with the exception of the Cháma, the Tambopata-Guarayo and the Huari, all had combs. PATER SCHMIDT[3]) has endeavoured to determine the area over which various types of comb are spread. He only concerns himself with what he calls «stick-combs», i. e., combs made of a number of sticks bound together. In the Chaco there is yet another kind of comb, consisting of a flat piece of wood out of which the teeth of the comb are carved. Various forms of these «stick-combs» are found spread over the larger part of S. America. I take the liberty of making this reference to PATER SCHMIDT's classification, though I do not understand his division into various types. I will only point out here that the «stick-combs» used by the Choroti and the Ashluslay in their shape and manner of splicing, (Fig. 41) are, as a rule, identical with those found by LEHMANN-NITSCHE[4]) in the Puna de

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[1]) «*El peine* por ejemplo, tiene la forma de escoba que es la primitiva americana, y que ahora está sólo en uso entre los Patagones, Araucanos y en una parte de Méjico, según sabemos. Con la misma forma aparece en las sepulturas más antiguas de Pisagua En el periodo de Tiahuanaco, aparecen primero los peines con dientes, tanto en Pisagua como en todo el Perú, teniendo los peines conocidos de las tribus transandinas del Este y Norte la misma forma.» UHLE (6) p. 14.

[2]) p. 35.

[3]) p. 1084.

[4]) (1), Pl. 4, fig. F. 7 and fig. G. 5.

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Jujuy, by Boman[1]) in Calama in Atacama, and by myself[2]) in the Ollachea a valley in Peru. On account of the great similarity between the combs found at the archaeological excavations within the civilized area of the west and the combs of the Choroti and the Ashluslay, it seems clear to me that this type of comb in the Chaco is derived from western civilization. Whence the Indians of the Chaco originally received the comb is, however, unknown to me. From Pater Schmidt's classification we see that the comb is lacking among most of the Gês-tribes. It occurs within the old area of civilization on the Andes and everywhere among the Caribs, Guarani and Arawak tribes.

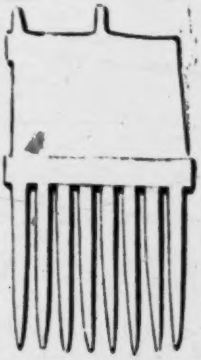

Fig. 40 A.
Wooden comb. Choroti.
G. M. (D. 24) 1/2.

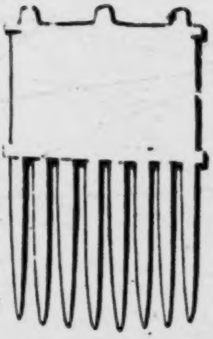

Fig. 40 B.
Wooden comb. Chiriguano. R. M. (E. 151) 1/2.

The wooden comb which, in contradistinction to the stick-comb, we may call the plain comb, has a rather limited area of occurrence. I have such combs in my collection from the Choroti, (Fig. 40 A) Chiriguano (Fig. 40 B), Chané, Mataco and Tapiete. Debenedetti depicts such a comb[3]) found in an excavation at Humahuaca in the northernmost part of Argentina and another from Kipón[1]). Uhle shows a wooden comb of the European type from Cajamarca in Peru[2]). Among the Ashluslay I have not seen this type of comb. The combs found among the Choroti are exactly like those of the Chiriguano, wherefore it is probable that they received this type of comb in the first instance from those Indians. In origin it is probably derived from western civilization.

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[1]) Fig. 171 f.
[2]) (3) Pl. 3, fig. 4 and 9.
[3]) (2), fig. 180.

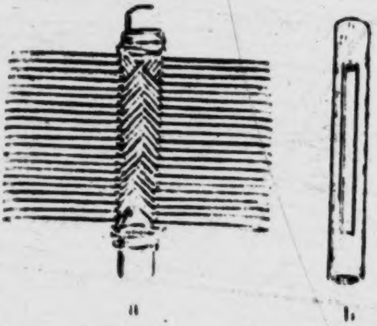

Fig. 41 a. Stick-comb. Ashluslay. R. M. (A. 602) 1/2. b. Back.

The stamps (Fig. 42) which the Indians employ in painting themselves also belong to the toilet articles of the Chaco country. These are sticks or flat pieces of wood with notched or lined carvings.

The ornamentation of these stamps is smeared with paint, whereupon the stamp is pressed against the skin. My collections contain stamps of this kind from the (1) Choroti and (2) Ashluslay for painting the face, and from the (22) Yuracáre for painting the face and clothes. Outside the Chaco stamps appear to be most spread in the north-west of S. America. In some districts they are made of burnt clay. We find them among the Indians of N. W. Brazil (48)[3]), among the (12)

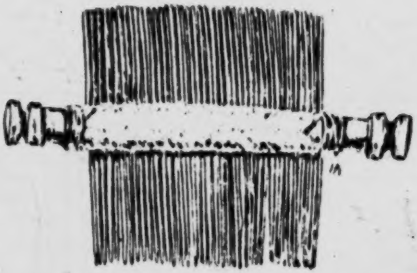

Fig. 41 b. Stick comb. Ashluslay. R. M. (A. 660) 1/1.

[1]) (1), fig. 16.

[2]) (1), Vol. 2, Pl. 17, fig. 8.

[3]) Koch-Grünberg, Vol. 1, p. 176 and p. 249.

2: Nordenskiöld E-5 (1908-1909)1919

SK6 Choroti SK6

Ashluslay SK5

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Mbayá[1]), (34), Jivaro[2]), (74) the Indians of the Orinoco[3]), (X 3) Piaroa[4]), (54) Guahibo[5]) (13) Karajá[6]), (15), Kayapó[7]), (8) Lengua[8]), (V5) Yekuaná[9]), (46) Conibo[10]) (71) Sipibo[10]), and (2 D) Setebo[10]).

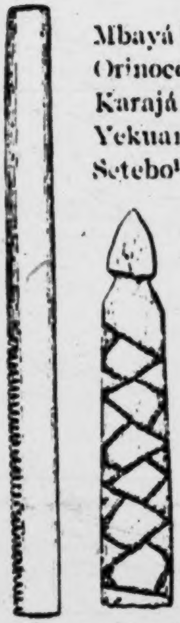
Fig. 42: Stamps used for the painting of the face. Ashluslay, R. M. (A. 1074, 1078) 1/1.

During archaelogical excavations in Columbia they have been found at Ubaté, Cundinamarca, Fresno, Tolima, (W) Guasca, Cundinamarca, (T) Manizales, Antióquia, Pereira near Cartago Viejo and Cauca[11]). All these are of burnt clay.

Saville[12]) found numerous stamps of burnt clay at (I) Manabi on the coast of Ecuador. They are also known from the island af Trinidad[13]).

From the vicinity of the old area of civilization in the west adjacent to the Chaco country, I know none of these stamps. At present I must leave the question open whence the Indians of the Chaco have received these elements of civilization.

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[1]) Sanchez Labrador, Vol. 1, p. 285. »El modo con que forman dichas figuras tiene algo de ingenio. De piel hacen los moldes sacándole los cortes y rayos que ha de llenar el color blanco, materia de la estrella. Cuando quieren parecer estrellados, arriman los moldes al cuerpo, ya pintado de encarnado ó negro»; Colini (1), p. 309.

[2]) Rivet (1), p. 28.

[3]) Gilij, Bd. 2, p. 58.

[4]) Marcano, Pl. 30.

[5]) R. M. (H. M. K. H. 12)

[6]) Krause, p. 218.

[7]) » p. 380.

[8]) M. f. V. B. (V. C. 520).

[9]) M. f. V. B. (V. A. 6101).

[10]) Colini (2), p. 533.

[11]) Uhle (1), Vol. 1, Pl. 3, Fig. 14-25. See also Fabrega p. 318.

[12]) Vol. I, p. 76; Vol. 2, p. 198.

[13]) Fewkes p. (not marked on the map.)

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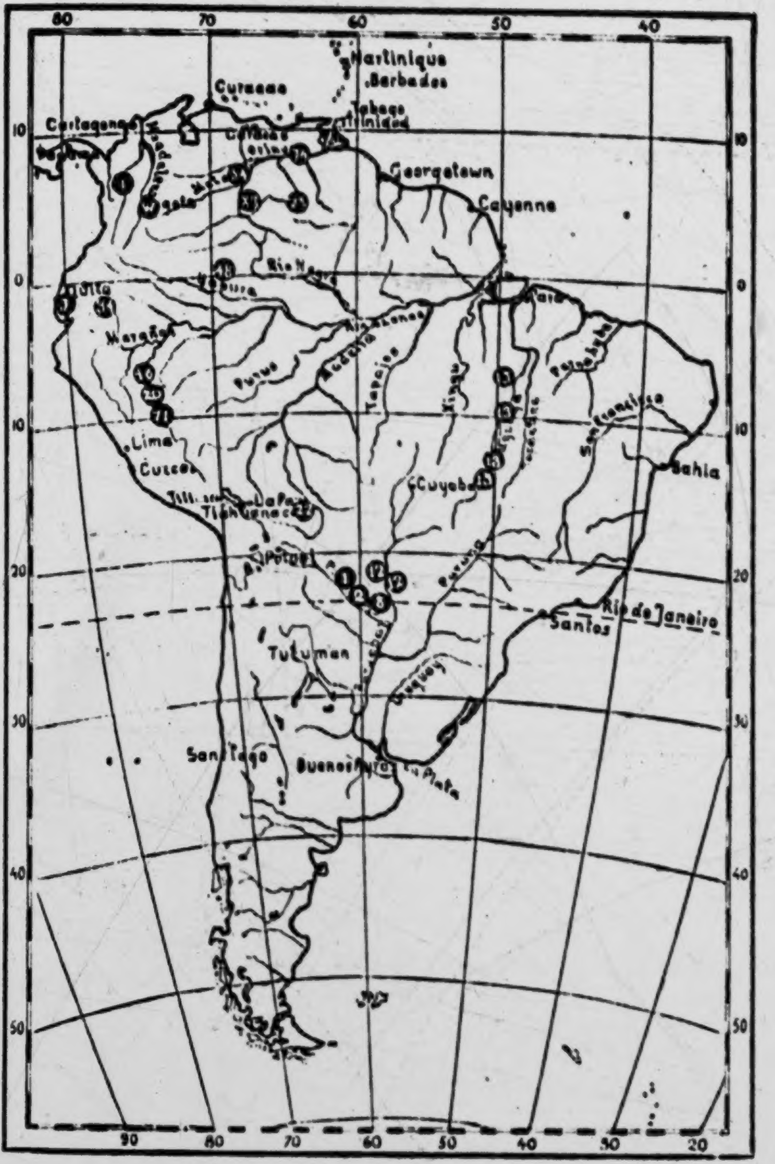
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Cartagena
Tobago
Trinidad
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Orinoco
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Cayenne
Bogota
Meta
Rio Negro
Quito
Yapura
Para
Marañon
Rio Amazonas
Madeira
Tapajos
Xingu
Purus
Parnahyba
San Francisco
Lima
Cuzco
Bahia
Cuyaba
Titicaca
La Paz
Tiahuanaco
Potosi
Rio de Janeiro
Santos
Tucuman
Uruguay
Santiago
Buenos Aires
La Plata
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Map 24. Areas wherein Stamps used for the painting of Face and Clothes occur.

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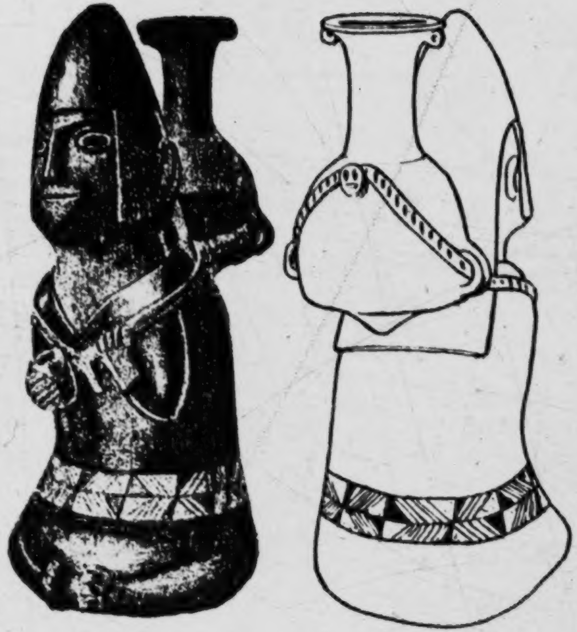
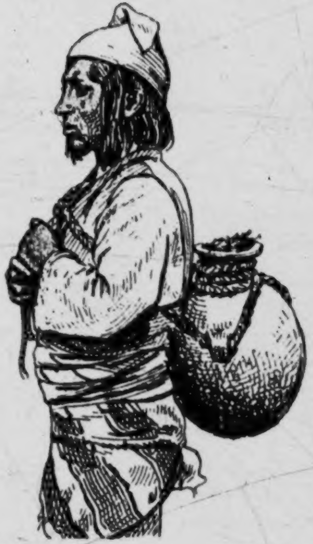


43.



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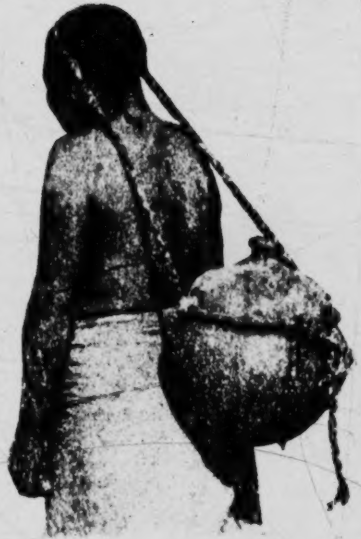

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[p.142]

Fig. 43. Earthenware vessels from Pachacamac, Peru.
Fig. 44. Quichua Indians.
Fig. 45. Choroti woman.

XXI.

Carrying-utensils.

In the Chaco all heavy loads are carried by women. A C
Like all South American Indians they carry heavy weights 482
on the back and never on the head. The load is fastened by
means of a band around the forehead. (Fig. 45)[1]). This is [462]
the one method of carrying known in S. America. The other is to fasten the load across the shoulders and round the chest. (Figs. 43 and 44). The pressure on the chest is generally equalized by holding with one hand the rope tied across the chest.

The Chaco tribes with whom we are here concerned bear their burdens in nets, never making use of baskets. In the accompanying table is indicated, by way of comparison, how the different tribes whom I got to know on my journeys bear their burdens.

On an examination of the literature dealing with the 000
bearing of heavy loads by various Indian tribes we find that, in the greater part of S. America, the method is for the burden to rest upon the back, and to be fastened around the forehead. Only in the western and southernmost parts of S. America do the Indians carry heavy burdens in such wise that the burden rests on the back and is then fastened around the shoulders and chest, as e. g. among the

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[1]) Sometimes the bearer, in addition to the brow-bands, has also bands across the shoulders. I have never seen these, however, in the Chaco, and elsewhere only among Indians serving white men as bearers.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti SK6

Ashluslay SK5

Ona[2]), Quichua[3],)[4], Atsahuaca, Paez[5]),and the civilized Indians of Colombia[6]). To anyone studying the form of the cranium

	Number on map	Burden carried on the back with a band over the forehead.	Burden carried on the back and fixed on the shoulders and chest	In a poncho or the like.	Carrying-net.	Basket.	Both men and women bear burdens.	Burdens borne chiefly by women.	Children carried by means of bearing-bands.
Ashluslay	2			—					—
Atsahuaca	32			¹)		?			
Aymara	19					—		—	
Chacobo	62			—		—	—		—
Cháma	73				—		—		
Chané	5								—
Chimane	24			—		—			
Chiriguano	4		—?	—		—		—	
Choroti	1		—	—		—	—		
Guarayú (Guarayos)	40			—	—		—		
Guarayú (Pauserna)	41			—	—		—		
Huanyam	43				—		—		
Huari	64			—		—	—		—
Mataco	6			—		—	—		
Quichua	18	—				—			—
Tambopata-Guarayo	6X		—	—	—		—	?	
Tapiete	3					—	—		—
Toba	7		—	—		—	—		—
Yamiaca	63		—	—	—	?	—	?	—
Yuracáre	22			—		—	—		

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of the various Indian tribes, it will probably be of some interest to learn that there are in S. America two methods of carrying burdens so unlike each other, and having such dissimilar geographical extension.

The carrying-net (Map 25) is found in the western and southern parts of S. America. From all appearances it belongs to an older period of civilization than the carrying-basket,

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[1] In holders made of bark.

[2] GALLARDO, p. 285.

[3] WHYMPER, p. 169.

[4] FERRIS, numerous illustrations.

[5] PITTIER DE FÁBREGA, Pl. 4.

[6] REGEL, Pl. 24, fig. 21.

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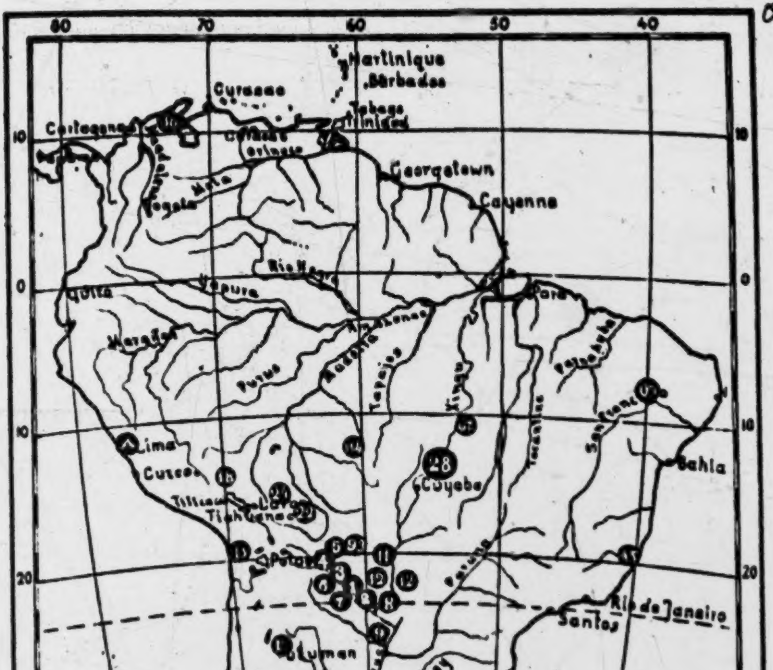
Martinique
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Trinidad
Cartagena
Orinoco
Georgetown
Cayenne
Bogota
Meta
Rio Negro
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Yapura
Para
Amazonas
Marañon
Purus
Madeira
Tapajos
Xingu
Tocantins
Parnahyba
San Francisco
Lima
Cuzco
Cuyaba
Bahia
Titicaca
Potosi
Paraná
Rio de Janeiro
Santos
Tucuman
Uruguay
Santiago
Buenos Ayres
La Plata
28
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70
60
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40
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Map. 25. The Distribution of the Carrying-net.

000 since it is used by most of the Gês-tribes who live in tracts where there is abundance of material for basket-making. The supposition that the use of carrying-nets among these tribes is due to the difficulty of finding suitable wicker is thus precluded.

The carrying-net is in use among the following tribes as well as those indicated in the table on p. 144: (45) Botokuds1), (27) Ona2), (67) Suya3), (28) Bakaïri4), (28) Mehinakú4), and (28) Auetö4), (11) Chamacoco4), (8) Lengua5), (12) Mbayá6), (36), Ijca7), (10) Araucanians8), and (03) Tapuya9). The (E) Diaguita10) seem formerly to have made use of carrying-nets; UHLE11) found carrying-nets in the very old excavations at (B) Arica.

In all probability various nets found on the coast of (A) Peru are also carrying-nets. In the Linden Museum at Stuttgart there are nets of this kind from Valle de Chancay. One of these, made of fine string, is 125 centimetres long and 30 centimetres broad (when stretched)12).

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The waterpots are borne by the Choroti, Ashluslay, Mataco, Toba13), Tapiete, Lengua14), and Mbayá15) in the Chaco in a very characteristic manner (Fig. 45). Around the pitcher, which is indented at the middle and has two ears, there runs a cord. This is fixed by the woman who carries the pitcher

1) v. IHERING (2), Pl. 4, Fig. 7. WIED, Vol. I, Pl. 14.

2) GALLARDO, p. 285 Very simple form.

3) v. D. STEINEN (1), p. 194.

4) RADIN, p. 928.

5) GRUBB, p. 95.

6) SÁNCHEZ LABRADOR Vol. 1, p. 271.

7) G. M. BOLINDER.

8) MASON, p. 535.

9) FRESCAROLO, p. 114.

10) AMBROSETTI (2), p. 449; QUIROGA, fig. 7.

11) (7), p. 30.

12) According to letter received from KOCH-GRÜNBERG.

13) Also the Toba on the lower Rio Pilcomayo. DUCCI, p. 8.

14) GRUBB, Fig. p. 99.

15) SÁNCHEZ LABRADOR, Vol. 1, p. 291.

around the forehead in the same manner as when other A
heavy burdens are carried. While being carried the pitcher C
hangs on the back. No other Indians in S. America, except 482
the Quichua (Fig. 44)1) and possibly the Aymara, carry their pitchers in this manner on a cord passing through the two ears of the vessel. It reminds one not a little of the method prevailing among the Incas of carrying the «Aryballes» (see Fig. 43) so characteristic of the Inca period, and it appears to me by no means improbable that the water-pitcher now used in the Chaco is a development of the aforementioned Incan type on which was also carried a rope. It is evident that the idea of carrying earthenware vessels on a rope, as well as the ears of the vessels (see page 212) is derived from the Western area of civilization. «Aryballes» are found in North Chile, in N. W. Argentine, on the Bolivian tableland, in the mountains and on the coast of Peru, and in the mountains and on the south coast of Ecuador. This type of vessel is considered by BOMAN and UHLE, no doubt

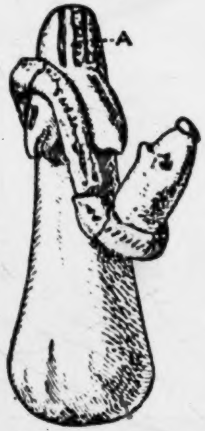

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Fig. 46. Clay doll. Indian woman with bearingband. Choroti. R. M. (D. 346) $^{2}/_{3}$. A — tattooing.

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1) WIENER, p. 128.

000 correctly, to be Incan, and may, indeed, be looked upon as a »clue-fossil» showing the extension of the Incan civilization[1]).

A C 482 854 The women carry their children sitting on the hips or, sometimes, on a bearing-band. (Fig. 46). Such bearing-bands are found mostly in the eastern and northern parts of S. America. (Map 26).

I have seen them not only among the (1) Choroti but also among the (6) Mataco, (41) Guarayú (Pauserna), (40) Guarayú (Guarayos), (43) Huanyam, (24) Chimane, (32) Atsahuaca, (6 X) Tambopata-Guarayo, (3) Tapiete and (22) Yuracáre. They are not found among the Aymara, Quichua, Chiriguano, Chané and Cháma. Nor have I found bearing-bands in use among the Ashluslay and the Toba.

000 In the literature dealing with this subject such bearing-bands are mentioned as being in use among the following tribes: (45) Botokuds[2]), (97) Purí[3]), (15) Kayapó[4]), (38) Tupinambá[5]), (21) Coroados (Cainguá)[6]), (4 C) Guajajara[7]), (4 X) Gês-tribes, Maranhão[8]), (4 X) Tajé[9]), (20), Paressi-Kabiši[10]), (31) Chipaya and Curuahé[11]), (34) Jivaro[12]), (42) Caripuna[13]), (59) Crichana[14]), (46) Conibo[15]), (48), Kobéua[16]), (31) Ojana[17]),

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[1]) See UHLE (2), p. 17; BOMAN, p. 205 and JIJÓN Y CAAMAÑO, p. 154.
[2]) V. IHERING (2). Pl. 5, fig. 8.
[3]) WIED, Vol. I, p. 136.
[4]) KRAUSE, p. 303 and 304. Pl. 25.
[5]) STADEN. Vol. 2, (p. 18.); PISO ET MARCGRAV, p. 274.
[6]) KÖNIGSWALD, fig. 33, p. 31.
[7]) PLAGGE, p. 206.
[8]) RIBEIRO, p. 188.
[9]) NIMUENDAJÚ-UNKEL (2), p. 620.
[10]) MAX SCHMIDT (4), fig. 30.
[11]) SNETHLAGE, Pl. II.
[12]) FESTA, Pl. foll. p. 194.
[13]) KELLER-LEUZINGER, p. 105.
[14]) BARBOSA RODRIGUES, p. 165.
[15]) SALA, fig. p. 78.
[16]) KOCH-GRÜNBERG, (2) Vol. 2, p. 147.
[17]) GOEJE (I), Pl. 7, fig. 19.

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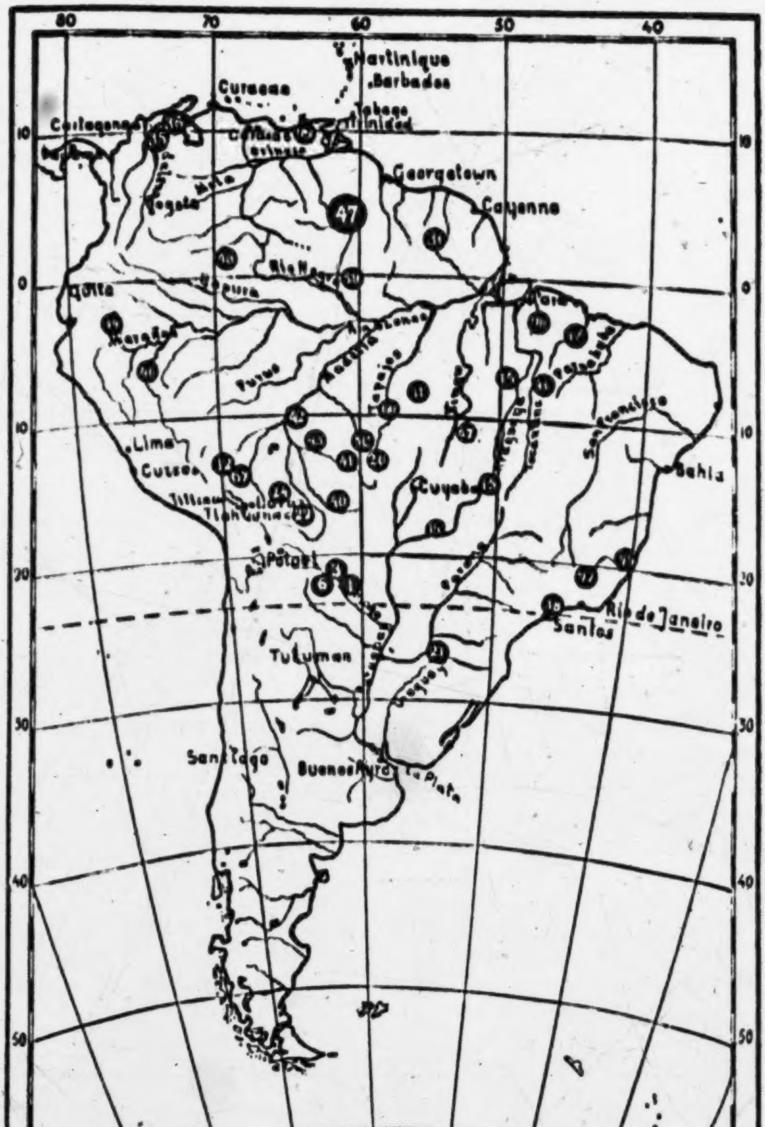
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Map 26. Areas where Infant Bearing-bands occur.

500 (98). Ararandeúara[1]), (47) the tribes of the Roraima district[2]) (99) Provinz Piritú, Venezuela[3]), (5 C) Nambiquara[4]), as also (60) the Apiacá[5]), (Rio Tapajos), (67) Suyá[6]).(14) Bororó[7]) (36) Ijca and Köggaba[8]) and Chimila[8]). These bearing-bands are wanting among the Karajá[9]).

[1]) Lange, Pl. foll. S. 215. (Tembé.)
[2]) G. M. Phot. Koch-Grünberg.
[3]) Ruiz Blanco, p. 57.
[4]) Roquette Pinto (2), p. 169.
[5]) Coudreau, p. 67.
[6]) K. v. d. Steinen, (2), p. 204.
[7]) " (3).
[8]) Bolinder (4), p. 67 and p. 148.
[9]) Krause.

Ashluslay SK5

XXII.

Holders for Various Articles.

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On entering a Choroti or Ashluslay hut, one finds lying on the floor, or else hanging in the hut, large and small bags knitted of Caraguatá. In these bags which, as has been mentioned, are used on journeys for carrying articles in, these Indians keep their goods and chattels. Besides these bags they have also pouches of ostrich-skin, wild pig-skin, and ostrich-necks. Small articles are usually kept in small pouches and bags placed inside larger ones for preservation. Ornamental feathers are usually kept by these Indians in sections of reeds.

The Mataco, Toba, and Tapiete Indians preserve their property in like manner. All is preserved in such wise that it can be collected in a short time when they desire to set out on a journey or escape with all their goods and chattles.

As most writers say nothing as to how the Indians preserve their private property, I will here content myself with drawing a comparison between the tribes I have got to know personally. The following tables indicate the commonest manner of preservation.

Ashluslay. — Caraguatá bags, pouches of leather, sections of reeds.

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Atsahuaca. — Baskets.

Aymara. — Sacks and satchels of cloth, niches in the hut, storehouses.

Cavina. — Baskets, satchels of bought cloth, storehouses.

000 Chacobo. — Baskets, storehouses.

Cháma. — Baskets.

Chané. — Earthenware vessels, hooks in the ceiling, storehouses.

Chimane. — Baskets, shelves, cloth bags.

Chiriguano. — Earthenware vessels, hanging on the roof of the hut, hooks in the ceiling, storehouses.

[415] Choroti. — Caraguatá bags, pouches of leather, sections of reeds.

Guarayú (Pauserna). — Baskets, in leaves.

Huanyam. — Baskets, leathern bags, bast holders.

Huari. — Hanging in the hut, stuck into the walls of the hut.

Mataco. — Caraguatá bags, shelves, leather pouches, sections of reeds, storehouses.

Quichua. — Sacks and pouches of cloth, niches in the hut, storehouses.

Siriono. — Baskets.

Tambopata-Guarayo. — Baskets.

Tapiete. — Caraguatá bags, leather pouches, sections of reeds.

Toba. — Caraguatá bags, leather pouches, sections of reeds

Tsirakua. Caraguatá bags, leather pouches, sections of reeds.

Yamiaca. — Baskets.

Yuracáre. — Baskets, pouches of bast, and bought cloth.

XXIII.

Games and Playthings.

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Two kinds of games can be distinguished among the Chaco Indians, viz. games of chance and games of skill. The area of occurrence of the former shows that they have come to the Choroti and the Ashluslay from the civilized area in the west. Games of chance in S. America have consequently an evident westerly extension. (Map 27). They are mentioned by Garcilasso de la Vega[1]) and by Cobo[2]) with regard to the Incas, by Medina and Manquilef and others as to the Araucanians in Chili, and by Luis de la Cruz as to the Peguenche in Argentina. During my travels in the Chaco I have seen games of chance among several tribes mentioned below. Hawtrey mentions games of chance among the (8) Lengua and Ducci among the (9) Toba de Taccagalé.

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The (1) Choroti as a rule play games of chance in the following way. First they make a Counting-board on the floor, i. e., they make a row of shallow holes. (Fig. 47).

Holes 1 and 21 are the »homes» of the opponents. In each of these holes a peg or an arrow[3]) is stuck at the beginning of the game. In 2—10 and 10—20 smaller pegs are

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[1]) Libro II, Cap. XIIII, p. 40.

[2]) Vol. 4, p. 228.

[3]) See Eric von Rosen (I) Pl. 17, 1.

[text continues on p. 155]

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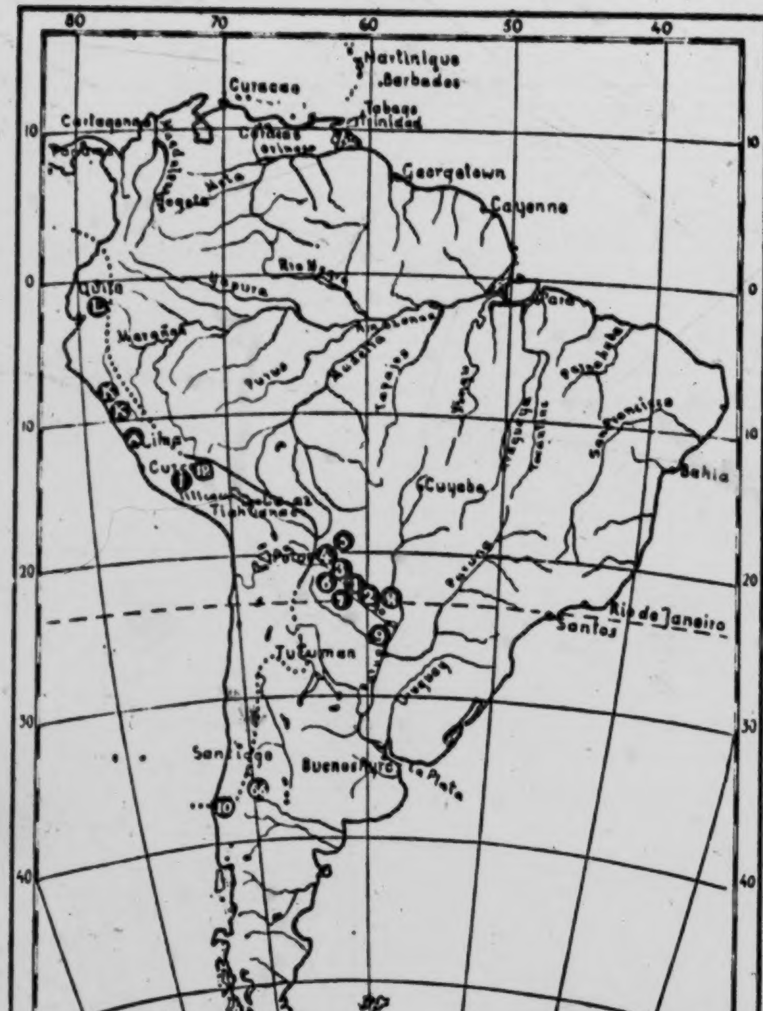
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Map. 27. Distribution of Games of Chance.

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stuck, usually called «sheep»; 11 is empty and is called the lake or the river[1]).

Two, four or more persons can play. For dice they have four pieces of wood which are convex on one side and, on the other, flat or concave. The convex sides are often ornamented.

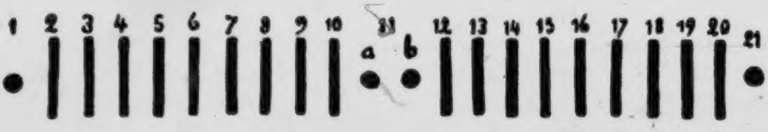

Fig. 47. Counting-board of the Choroti.

The players take two wooden dice in each hand and throw them against each other so that they fall on the floor. The points are reckoned thus: —

4	convex	sides	up	counts	4
3	»	»	»	»	0
2	»	»	»	»	1
1	»	side	»	»	0
0	»	»	»	»	2

Thus, if A begins and throws 2, he puts his arrow in 3; should he thereupon throw 1, he puts it into 4, etc. A plays until he throws 0, when B begins and plays until he throws 0. When A gets over 11 and B under 11, they knock out the pegs from the holes to which they come. The aim is to be first to knock out all the pegs on the side of one's opponent. Play is always from one side to the other, turning at the «homes». When a player catches the marker of his opponent, the latter is knocked out and must begin again, not, however, from his «home» but in the hole nearest to the home where he has a peg. This is knocked out. When all the pegs of one's opponent are knocked out, the opponent's

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[1]) These explanations I have received in Spanish. The Chané and the Chiriguano call 1 and 21 «()» «home» and 11 they call «()» water. The Tapiete do the same.

C 524 marker has to be knocked out. Having done that, one has won the game. Should anyone while playing reach 11, i.e. fall into the water and not succeed in getting away at the next throw, but throw O, he must return to the hole in which he still has a peg nearest to «home». Should only the two markers be left, and one fall into the water, the player not succeeding in getting away at the next throw, but C throwing O, the game is then drawn.

A 524 With small variations the Ashluslay, (6) Mataco, (7) Toba, (3) Tapiete, (4) Chiriguano, and (5) Chané play in a similar manner. The number of «sheep» a player has varies somewhat in different tracts but his opponents have, of course, always the same number. Only among the Choroti and the Ashluslay is the lake or river duplicate. The reason is unknown to me.

880 The Chané Indians call this game «Chunquánti». Cobo[1] writes that the Indians of Peru have a game which they call «Chuncara». In this game they made use of a flat stone or a piece of wood in which five holes were hollowed out. Beans of different colours served as markers. A die was cast, and according to the result of the cast, the player proceeded in the holes until the end was reached. The first «home» counted ten, the second twenty, and so on till fifty.

GARCILASSO DE LE VEGA[3]) says that the Incas called the players «Chunca Camayu» and all games «Chunca» ten. This was because they always counted in tens in their games.

«We play», in their language, was «Chuncasum» which means literally «we reckon in tens». It is evident that the

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[1] Vol. 4, p. 228: «*Chuncara* era otro juego de cinco hoyos pequeños cavados en alguna piedra llana o en tabla: jugábanlo con frisoles de varios colores, echando el dado, y como caía la suerte, los mudaban por sus casas hasta llegar al término: la primera casa valia diez, y las otras iban creciendo un denario hasta la quinta, que valia cincuenta.»

[2] GÓMARA says, p. 278, of the Inca: «Juegan con un solo dado de cinco puntos, que no tienen mayor suerte.»

[3] Libro II, Cap. XIIII, p. 40.

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6
Ashluslay SK5

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Chané have received the name Chunquánti from the Quichua language. The Choroti word for game, «tsúka», and the Ashluslay name «tsukoc» are plainly derived from Chunca.

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Just as in Sweden backgammon players, in counting, use words derived from the French language, e. g. «tres ess, cinca dus, troya-dus», etc., the Indians of the Gran Chaco employ words for reckoning derived from the Quichua language. When the Ashluslay and Choroti make a cast counting four points, they say «tauva» which, in the Quichua tongue, signifies four. When reckoning in other connections the Ashluslay say «it-chat-cúch» for four and the Choroti «inulitse» or «inujlitsi». When the Ashluslay throw three points they say «chimí». Three, in the Quichua tongue, is «quimsa», in the Ashluslay «pú-shana». The Choroti, for the same throw, only mark two, and say «kiirá». Otherwise they say for two «ti-ines» and for three «nahape». For one point the Choroti say «tsúka» and the Ashluslay «tsuká» which is also the first name for the game. «Chunca» signifies ten in the Quichua tongue and we recollect that, according to GARCILASSO, the Incas in their games always reckoned in tens.

This circumstance, that the game of chance in question has in the Chaco a name derived from the Quichua language and there used for «game» generally, and the fact that, in the Chaco, Quichua expressions are made use of in games *show that the Tsúka or Chunquánti game derived originally from the area of civilization in the west.*

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As I have already pointed out in an article in the Zeitschrift für Ethnologie in 1910, there is a remarkable similarity betwen the Tsúka or Chunquánti game and certain North American games described by CULIN. It would appear from this that these games or, at least, similar games belong to a very ancient layer of civilization in America.

In another article in the above mentioned magazine I have recently endeavoured to prove that some peculiar objects found in Peru and Ecuador, and described at length by

000 Rivet and Verneau[1]), have been employed in games of chance similar to others now played by the Choroti and other Indians in the Chaco. The places where these objects were found are indicated in the map showing the distribution of games of chance. (A. K. L.)

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In the Chaco, among the tribes here dealt with, I have only seen one game of skill, viz. a *ball game with a bat*. (Map. 28). Such ball games I have found besides among the (1) Choroti, (6) Mataco and (2) Ashluslay[2]), among the (4) Chiriguano (7) Toba, and (3) Tapiete. Formerly this game was probably played by the Churápa Indians too. These ball-games are best known from the (10) Araucanians. When the first Conquistadors came to the Araucanians, they saw them playing at ball with wooden bats[3]). To this day it is the national sport of these Indians[4]). Sánchez Labrador[5]) mentions this game from the (12) Mbayá, Hawtrey[6]) from the (8) Lengua, Boggiani[7]) from the (11) Chamacoco, and Ducci[8]) from the (9) Toba on the lower Rio Pilcomayo. This kind of ball game, as we see, occurs chiefly in the southern part of S. America. Nevertheless I do not consider it incredible that originally it came to the Indians of the Chaco, and to the Araucanians, from the mountain area of civilization.

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[1]) (4), p. 244. See Nordenskiöld (10).

[2]) See »Indianerleben«. Page 71.

[3]) Lenz, p. 322. After Lovera, p. 138.

[4]) See Eulojio Robles Rodriguez.

[5]) Vol. 2, p. 12.

[6]) p. 207.

[7]) (1), p. 61, Fig. 35.

[8]) p. 7.

2: Nordenskiöld E-5 (1908-1909) 1919
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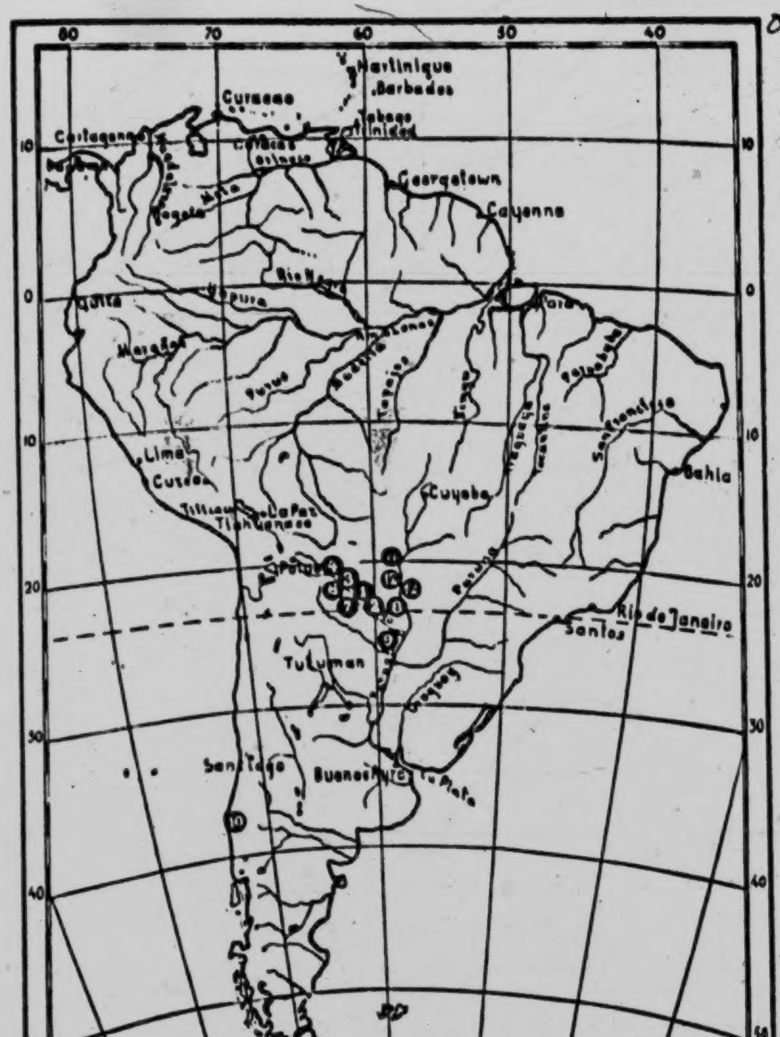
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Map. 28. The Distribution of Bat and Ball Games.

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Games with maize leaf balls which are struck with the hands (Map 29) have quite an different area of occurrence. Balls of this kind occur in the collection of ERIC V. ROSEN (R. M. 03.3. 199—201) from the Choroti. I have seen balls of this kind among the (4) Chiriguano, (40) Guarayú, (23) Churápa, and (24) Chimane. K. v. d. STEINEN[1]) mentions them from the (28) Bakaïrí and (14) Bororó, KOCH-GRÜNBERG[2]) from the tribes on the Rio Caiarý and Rio Aiarý, ST. CRICQ[3]) from the (46) Conibo on the Rio Ucayali, SÁNCHEZ LABRADOR[4]) and BOGGIANI[5]) from the (12) Mbayá, KRAUSE[6]) from the (13) Karajá, HAWTREY[7]) from the (8) Lengua, IM THURN[8]) from the (47) Macusi, GILIJ[9]) from the (74) Tamanaco, and KOCH-GRÜNBERG[10]) from the (47) Roraima area as well as from southern (V 5) Venezuela.

Probably such balls are in vogue also among a number of other Indian tribes. It seems, however, that for the present, at least, they are to be reckoned among the elements of civilization occurring chiefly in the northern area.

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Among the Choroti, Mataco, and Ashluslay there are some other playthings besides the above-mentioned. The playthings of Indian children have, however, been too little studied for us to be already able to determine the area of occurrence of the various playthings.

The Choroti, Ashluslay and probably also the Mataco make so-called *cats-cradles* I have also seen them among

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[1] (3). p. 329 and 496.

[2] (2). Vol. 2, p. 126.

[3] p. 289. »balle de feuilles de palmier» — *probably wr ong; should be maize-leaf balls.*

[4] Vol. 2, p. 18, Fig.

[5] (2), Fig. 51.

[6] p. 312.

[7] p. 277.

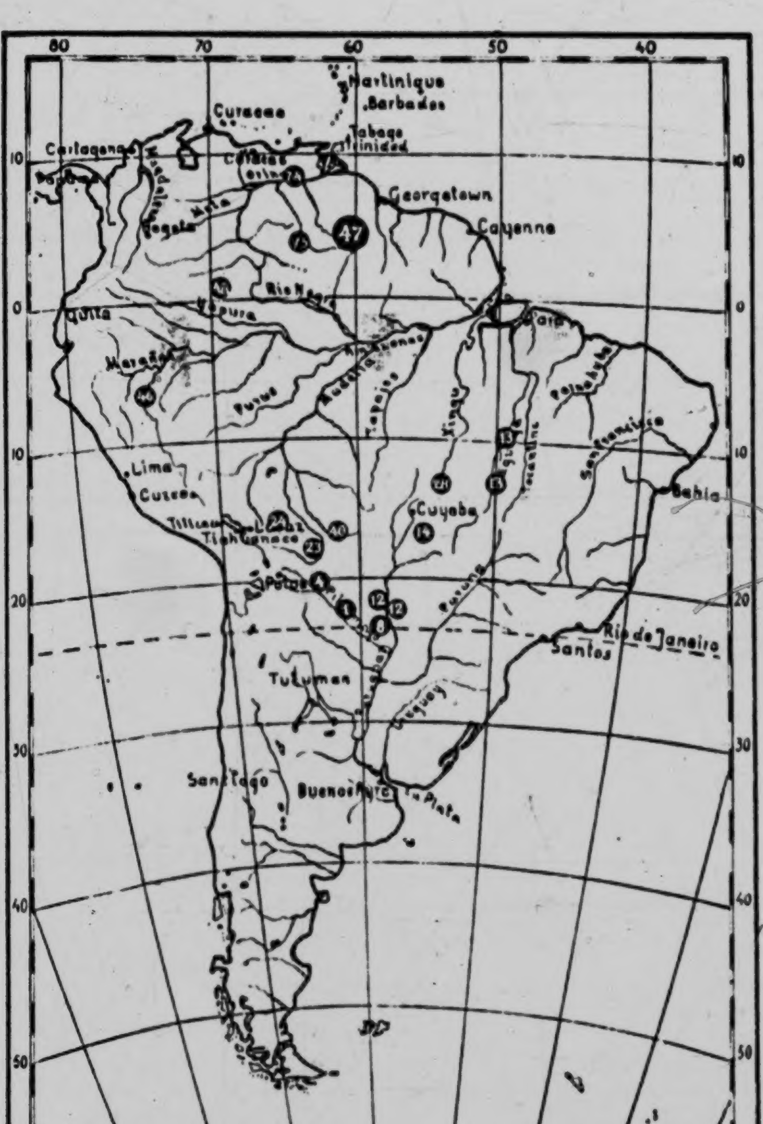
[8] p. 326.

[9] Vol. 2 p. 267.

[10] (3), p. 79, Fig. 8.

2: Nordenskiöld E-5 (1908-1909) 1919

SK6 Choroti SK6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Map. 29. The Distribution of Games with Maize Leaf Balls.

000 the Toba, Tapiete, Yuracáre and Cavina. **Hawtrey**[1]) mentions cats-cradles from the Lengua, **Ducci**[2]) from the Toba on the lower Pilcomayo, **Koch-Grünberg**[3]) from N. W. Brazil, **Roth**, **Lutz** and **Koch-Grünberg** from Guiana, **Kissenberth**[4]) from the Tapirapé and **Ehrenreich**[5]) and **Krause**[6]) from the Karajá.

This game is undoubtedly played by many other Indian tribes, though nothing is known about it. The game, which is played not only by children but also by adults, is one of the elements of civilization the distribution of which can only be determined after further exploration.

A 524 481 The same holds good of stilt-walking. I have seen it among the Ashluslay, and elsewhere only among the Cavina on the Rio Beni. Stilts are also mentioned by **Koch-Grünberg**[7]) from the Siusí in N. W. Brazil and by **Manquilef**[8]) from the Araucanians. The *bull-roarer* may also be included here. In S. America this is seldom anything but a plaything. I have in my collections, besides those from the tribes here dealt with, bull-roarers from the Chiriguano, Chané, Yuracáre, Guarayú (Mission), Chacobo, and Itonama. **Karl v. d. Steinen**[9]) mentions the bull-roarer from the Bororó, Mehinakú, Nahuquá and Bakaïrí and **Ehrenreich**[10]) from the Ipurina.

A c 524 The Choroti and Ashluslay have a kind of peculiar *dolls* (fig. 46) which I have described and illustrated in a special little article in the Ymer magazine and in my book «Indianerleben». Whence they got the idea of these dolls I will not venture to

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[1]) p. 285.
[2]) p. 6.
[3]) (2). Vol. I, p. 120, 253 and Vol. 2, p. 1[illegible]7.
[4]) (2), p. 78.
[5]) (2), p. 30.
[6]) p. 312.
[7]) (2), Vol. I, p. 119.
[8]) p. 111. fig. 3.
[9]) (1), p. 327 and 498.
[10]) (2), p. 71.

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6

Ashluslay SK5

say. In addition to the above-mentioned tribes I have seen them among the Toba, Tapiete and Mataco. The Choroti dolls are remarkable for the face-tattooing being so accurately performed, though it is done on the body. Dolls made of the toe-joints of ostriches also occur among them. The Toba and, according to HAWTREY[1]), the Lengua also have dolls of this kind.

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[1]) P. 297.

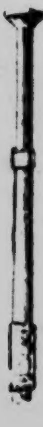

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Fig. 48. Skin-drum stick [illegible]). 1/4.

XXII.

Signals and Musical Instruments etc.

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534 Considering their primitive state the (1) Choroti and the (2) Ashluslay possess a good many musical and signalling instruments. They have several kinds of whistles, rattles, *skin-drums* (Map 30) trumpets, flutes and the musical bow.

The skin-drums which, among the tribes here mentioned generally consist of an earthen vessel half full of water, over which a skin is stretched, are probably one of the elements of civilization which have come to the Chaco Indians from the mountain area of civilization. Like (A)the Incas[1], Indians of the Chaco never make use of more than one drumstick. 800 (Fig. 48). The skin-drum is one of the elements of civilization in the spreading of which the whites have undoubtedly contributed. Thus the drums which the Indians of (48) N. W. Brazil employ give the impression of being imitations of the drums of the whites. The Katapolítani Indians call the skin-drum «tamborino» and the Siusí Indians «tamorino».[2] Koch-Grünberg does not mention any other names for the skin-drum. Moreover these drums are covered with skin on both sides, while the real Indian drum has skin on one side only. Nor do I consider the skin-drums found among the Indians

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[1] Cobo, Vol. 4. p. 229 and Mead, Pl. 2, fig. 7 and 9.

[2] Koch-Grünberg, (5), p. 80.

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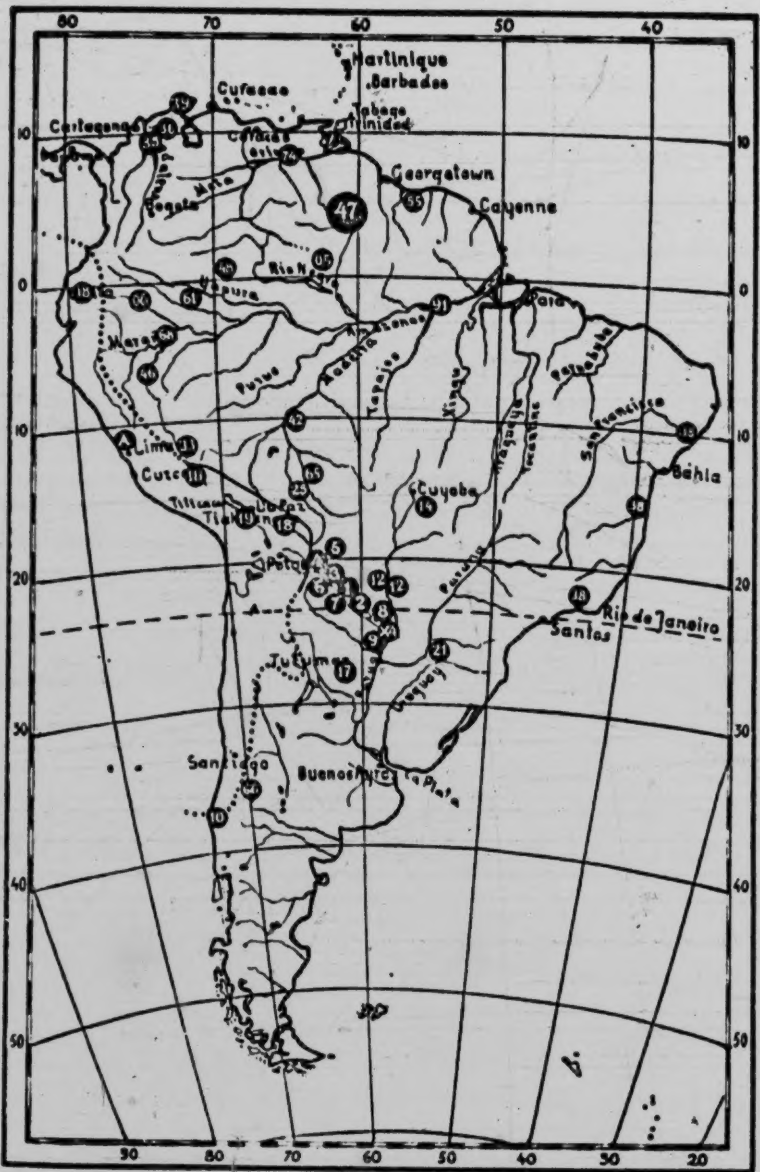
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Map. 30. The Distribution of the Skin-drum.

000 of (47) Guiana to be genuine Indian ones. Indeed the Macusi call the skin-drum «Zambola».[1])

The same is true also of the skin-drum which GILIJ found among the Indians of the (74) Orinoco. GILIJ himself is of this opinion. He writes as follows: —[2]) «mi do a credere, che questa foggia di tamburi sia moderna tra' Tamanachi. La voce Ciambura, con cui li chiamano, sembra venuta dallo Spagnuolo tambor.»

In keeping with this, K. V. D. STEINEN found no skin-drums among the Indians on the Upper Rio Xingú, who, when he visited them, were unaffected by the civilization of the whites. The Karajá have likewise no skin-drums.

A C [534] The fact that the Chaco Indians stretched the drum-skin over an earthen vessel and not over a wooden frame must have been owing to the difficulty of working in wood with poor tools.

In the table on page 183 I have indicated the tribes among whom I have found the skin-drum. They are, besides the (19) Aymara and (18) Quichua who have now skin-drums of European type, only the tribes living south of Sta. Cruz de la Sierra. Skin-drums are found north of that place too, but exclusively among civilized Indians. It is, however, possible that the Indians there have had genuine Indian skin-drums, as the skin-drum is mentioned by CASTILLO[3]) from the (25) Mojo Indians, and by ALTAMIRANO[4]) from the (65) Baure.

Negro-slaves may also have spread the skin-drum in S. America. Thus PANHUYS[5]) mentions the skin-drum from the negroes of Surinam, where it is also found among the (55)[6])

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[1]) GOEJE (1), p. 45.
[2]) Vol. 2, p. 350.
[3]) p. 310.
[4]) p. 107.
[5]) p. 524.
[6]) GOEJE, (1), p. 45.

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Kalina. Barrere[1]) speaks of the skin-drum of the negroes in contradistinction to the flutes of the Indians.

In Bolinder's collection from the (36) Ijca Indians in Columbia there is a skin-drum which has a distinctly African appearance[2]).

The skin-drum is furthermore known among the (30) Goajiro[3]) the (05) Pauišana[3]), (42) Caripuna[4]), (06) the Indians on the Rio Napo[5]) the Indians on the (61) Rio Yapurá and Rio Iça[6]), (68) Omagua[7]), the Indians on the (91) lower Amazon[8]), (46) Conibo[9]), (14) Bororó[10]), (38) Tupinambá[11]), (38) Tupinaê[12]), (38) Amoipira[13]), (21) Cainguá[14]), (8) Lengua[15]), (X 4) Payaguá [16]), (10) Araucanians[17]), (66) Peguenche[18]), (12) Mbayá[19]), (17) Abipone[20]), (33) Campa[21]), and (35) Chimila.[22]).

Staden does not mention the skin-drum among the Tupinambá. Granting that the skin-drum has come to some

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[1]) p. 192.

[2]) Bolinder (4), p. 268.

[3]) Pater Schmidt, p. 1071.

[4]) Gibbon, S. 298. Pater Schmidt, p. 1071.

[5]) Rivet, (1), p. 53.

[6]) Whiffen, p. 216.

[7]) Chantre y Herrera, p. 74.

[8]) Gaspar de Carvajal, p. 64.

[9]) St Cricq, p. 289; Castelnau, Vol. 4, p. 379.

[10]) K. v. d. Steinen (4), p. 496.

[11]) Soares de Sousa, p. 300.

[12]) Soares de Sousa, p. 312.

[13]) Soares de Sousa, p. 314. »e usam na guerra tambores que fazem de um. só páo que cavam por dentro com fogo tanto até que ficam mui delgados.»

[14]) G. M. (15.8.9).

[15]) Grubb p. 75.

[16]) Azara, (2), p. 304.

[17]) Medina, p. 301.

[18]) Luis de la Cruz, p. 65.

[19]) Sánchez Labrador, Vol. 1, p. 309.

[20]) Dobrizhoffer, Vol. 2, p. 266.

[21]) Ordinaire, p. 281.

[22]) Bolinder (4), p. 268.

Ashluslay SK5

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tribes from the whites and possibly also from negro slaves, it is yet evident that in the Chaco it is an element of civilization which the Indians have received from the mountain area of civilization.

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Whether the special form of skin-drum — the earthenware drum — which is found among the Choroti and the Ashluslay, was also used by the Indians inside the western area of civilization, I do not know. Besides these tribes it is also known from the (8) Lengua[1]), (6) Mataco, and (X 4) Payaguá[2]).

BOLINDER[3]) who, a short time ago, published a work on the musical-bow, mentions it from the Busintana, Araucanians and Patagonians in addition to the tribes named in the table. Like several other explorers BOLINDER is of the opinion that the Indians received the musical bow from Africa through the mediation of negro slaves.

String instruments are held to have been unknown in America in the time before Columbus. They are not mentioned in the literature on the Incas from the time of the Discovery, nor have they been met with in the archaeological excavations which have been carried out in the dry coast districts of Peru, where they might well have been preserved.

The Indians seem to have learned the use of these string instruments from their white conquerors or their negro slaves at a very early date. GASPAR DE CARVAJAL[4]), who accompanied ORELLANA and described his journey, states of some Indian tribes on the lower Amazon (not at the mouth itself) that they had musical instruments fitted with three strings so-called «Arrabeles». He writes as follows: «Venían muy lucidos, con diversas divisas y traían muchas trompetas

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[1]) GRUBB, Page 75.

[2]) AZARA (2), Page 304.

[3]) (4).

[4]) Page 64.

y atambores, y órganos que tañen con la boca y arrabeles 680
que tienen a tres cuerdas.»[1])

As early, then, as the time of ORELLANA the Indians of the Amazon possessed a fairly advanced type of string instrument which they must have got from the Europeans, since it is not possible that such a complicated musical instrument could otherwise have had in the whole of America merely a local occurrence.

This is a matter of considerable interest, as it shows how speedily new elements of civilization coveted by the Indians can be acquired by them after they have come into contact with the conquerors. It is also probable that, especially at the beginning of the period of conquest, where famous Indian tribes like the Tupinambá, some Arawaks and others were not oppressed, foreign elements of civilization were more easily assimilated by them than later on when they lost their independence and self-confidence.

The *rattle-gourd* (Map 31) is common among the (1) A
Choroti and the (2) Ashluslay, as well as among the (7) C
Toba, (6) Mataco, and (3) Tapiete. Otherwise I have not met [534]
with it among any of the tribes whom I have visited on my
journeys.

The rattle-gourd, however, occurs over an extensive area in S. America. We find it among the (48) Siusí[2]), (48) Uanána[2]), (48) Tucáno[2]), (48) Tuyúka and other tribes on the Rio Negro, among the (61) tribes on the Rio Yapurá and Rio Iça[3]), (14) Bororó[4]), (9) Toba[5]) on the lower Rio Pilcomayo

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[1]) It should be noted here that CARVAJAL's description of all that concerns the manners and customs of the Indians, with the possible exception of his description of the fight with the Amazons, gives a strong impression of trustworthiness.

[2]) KOCH GRÜNBERG (2).

[3]) WHIFFEN, Page 213.

[4]) K. v. D. STEINEN (3), Page 490.

[5]) DUCCI, Page 7).

(28) Bakaïrí[1], (28) Kamayurá[2], (28) Nahuquá[3], (77) Tapirapé[4], (20) Paressi-Kabiši[5] (15)) Kayapó[6], (13) Karajá[7], (50) Šavajé[8], (21) Cainguá[9], (8) Lengua[10], (12) Mbayá[11], (16) Guató[12], (38) Tupinambá[13], (7B) Wayganna, S. Brazil[14], (6 V) Guaná[15], (55) Kalina[16], (31) Ojana and Trio[17], (47) Patamona[18], (47) Makusi[18], (47) Arecuna[18], (8 x) Guarauno[19], (39) Goajiro[20], (36) Ijca[21], (35) Chimila[22], (54) Guahibo[23], (X 3) Piaroa[24], (8B) Mitoua[25], (46) Conibo[26], (74) the Indians on the lower Orinoco[27], (29) Caingáng[28], (4 X) the Gês-tribes, Maranhão[29], (5 B)

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[1] K. v. d. Steinen (3), p. 326.
[2] K. v. d. Steinen (4), p. 326.
[3] K. v. d. Steinen (3), p. 326.
[4] Kissenberth, (2), p. 72.
[5] Max Schmidt (4), p. 240.
[6] Krause, p. 400.
[7] Krause, p. 317.
[8] Krause, p. 365.
[9] Outes and Bruch (5), p. 97.
[10] Grubb, p. 74.
[11] Sánchez Labrador, Vol. 2, p. 34.
[12] Max Schmidt (3), p. 311. »Infant-rattles».
[13] Lery, p. 194; Soares de Sousa, p. 286; Staden, Vol. 2, (p. 25.) Yves d'Evreux, p. 134.
[14] Staden, Bd. (2), (p. 25).
[15] Cominges p. 200.
[16] Goeje (1), p. 45.
[17] Goeje (1), p. 24.
[18] G. M., Lijewalch-Thulin's collection
[19] Appun Vol. 1 p. 468; Schomburgk, Vol. 1. p. 170
[20] Candelier p. 200.
[21] Bolinder (3), p. 207. (Also Köggaba).
[22] G. M. (16.3.26), Bolinder.
[23] Stradelli, p. 40. fig. 18.
[24] R. M. (06. 31.6).
[25] Crevaux, p. 480.
[26] S:t Cricq p. 266.
[27] Gilij, Vol. 2, p. 275.
[28] Ambrosetti (1) p. 318.
[29] Ribeiro, p. 180.

2: Nordenskiöld E-5 (1908-1909) 1919
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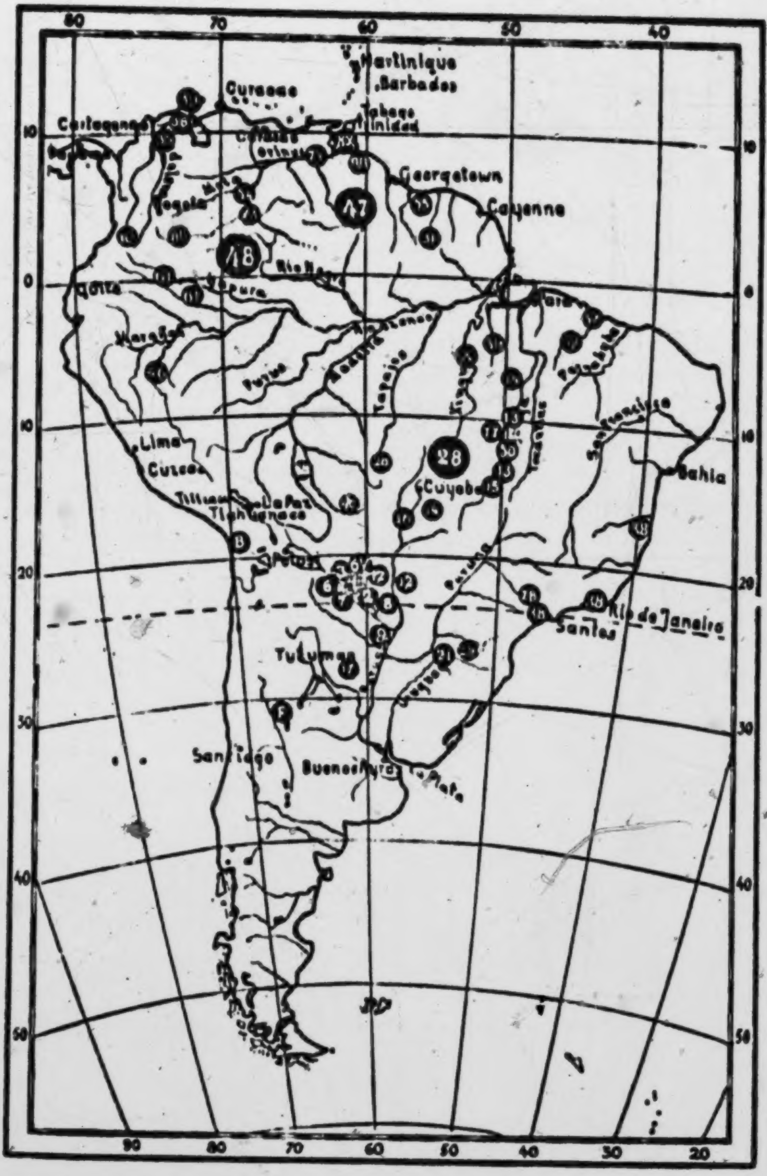
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Lima
Cuzco
Titicaca
La Paz
Tiahuanaco
Cuyaba
Bahia
Rio de Janeiro
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Map 31. Distribution of the Rattle-gourd.

ØDD Pariri[1]), (1C) Paez[2]), (17) Abipone[3]), (9 B) Arawaks, Guiana[4]), (5 X) Canella[5]), (25) Mojo[6]), (40) Guarayú[7]) and (X) Yurúna[8]).

Rattles are not found among the Gês-tribes on the Rio Doce[9]). They are not mentioned from the Jivaro Indians in Ecuador[10]) nor by EHRENREICH[11]) and STEERE from the tribes on the Rio Purús. In some parts rattles of other materials are found. The Patagonians have rattles of skin[12]), the Chamacoco[13]) have rattles consisting of two tortoise-shells tied together with a wooden handle.

According to UHLE, who has carried out such extensive excavations in western S. America, the rattle-gourd seems not to have been in use inside the area of civilization during later times. With regard to this area, as far as I know, it is not mentioned by any of the authors who describe the manners and customs of the Incas. In the old excavations at (B) Arica UHLE, however found calebash-rattles as well as rattles made of the bladders of animals and, possibly, of fishes, which were filled with small stones[14]). MEAD[15]) mentions also the rattle-gourd from the Peruvian coast, though without indicating exactly where it is found. DEBENEDETTI[16]) gives a sketch of a calabash-rattle found at (F) San

[1]) NIMUENDAJÚ UNKEL (1) p. 622.

[2]) PITTIER DE FÁBREGA, p. 125.

[3]) DOBRIZHOFFER, Vol. 2, p. 200.

[4]) GUMILLA, Vol 1, p. 174.

[5]) KISSENBERTH, (1), p. 51.

[6]) EDER, p. 148.

[7]) CARDÚS, p. 70.

[8]) K. V. D. STEINEN (2), Ethnologische Taf. Nr. II.

[9]) WIED, Vol. 1, p. 147.

[10]) RIVET (1); FESTA.

[11]) (2).

[12]) OUTES, (3), p. 250. »Siendo el instrumento musical que por entonces construian un pequeño recipiente con algunas pedrezuelas en su interior« (after DRAKE, p. 50).

[13]) BOGGIANI (1), fig. 33.

[14]) UHLE, (6) p. 14. [15]) p. 11. [16]) (4) p. 63. Fig. 30.

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6
Ashluslay SK5

Juan in Argentina. Two types of rattle gourd can be distinguished in S. America. 000 In the one the tapering part of the calabash serves as handle, while in the other the handle consists of a peg stuck through the calabash. It is the first, more primitive type which is found in the Chaco. It is not possible, at present, to make a satisfactory map of the distribution of the two types, as most of the authors who mention the rattle-gourd do not describe it in detail.

Evidently the rattle-gourd is an ancient element of civilization in S. America, and at the present time it is impossible to say whence the Choroti and Ashluslay received it.

I have not seen dance-masks among the Choroti or A
Ashluslay. A large number of the ornaments mentioned C
here, however, are in the first instance worn when dancing. 293
On these occasions also girdles are worn with pendent claws 534
of the tapir, peccary and other animals, which serve as rattles. Rattles of this kind are also fixed on long sticks and used in a certain dance.

Similar rattles are widely spread in S. America. Their 000 pendents, however, consist almost everywhere of fruit-rinds instead of claws. In the districts where I have travelled they are very rare. I have only seen them among the Churápa in the neighbourhood of Sta Cruz de la Sierra. From literature I know of such rattles of fruit-rinds from the Indian tribes on the Rio Negro[1]), Rio Yapurá and Rio Içá[2]), the Jivaro[3]), Bakaïri[4]), Karajá[5]), Tupinambá[6]), Patamona and other tribes in the Roraima area[7]) Ackawoi[8]),

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[1]) Koch-Grünberg (2), Vol. 1, Fig. 174

[2]) Whiffen, p. 213

[3]) Rivet (1), Fig. 7 & 17.

[4]) K. v. d. Steinen (1), p. 329

[5]) Ehrenreich (2), p. 40.

[6]) Soares de Souza, p. 268.

[7]) G. M.

[8]) Schomburgk, Vol. 1, p. 205.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti
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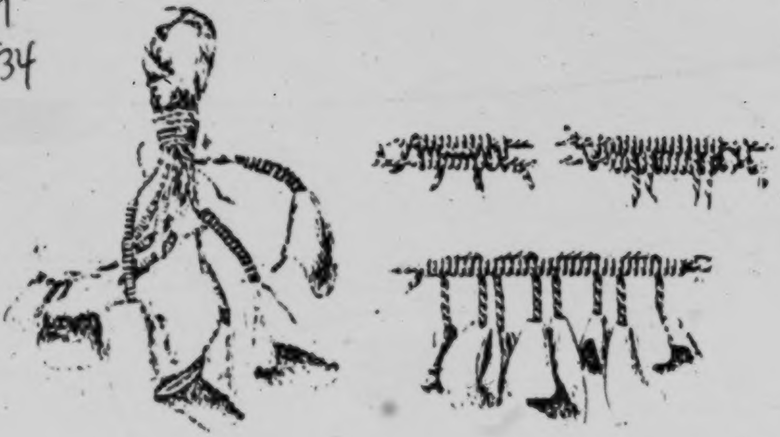

a.   b.

Fig. 99. Rattles made of the claws of animals.
a G. M. (B. 298) $^1/_2$. Ashluslay.
b R. M. (M. 241) $^1/_2$. Mataco.

Ashluslay SK5

Warrau[1]), Conibo[2]), Canella[3]), Tapuya[4]) Cumanagoto[5]) and from the Incas[6]), and rattles of the claws of animals from the Payaguá[7]) and Kayapó[8]). 020

If the great museums were searched a number of these rattles would probably be found from other tribes. Moreover the particulars I quote here from literature on the subject might certainly be considerably amplified. It is interesting to see how the claws are fastened on the rattles from the Chaco. (Figs 49a and 49b)

Trumpets of a peculiar kind are found among the Choroti, Ashluslay and Chané. They consist of a cow's horn with a reed mouthpiece (Fig. 50). I have not seen trumpets with such mouthpieces among any other Indian tribes visited by me, nor have I found them described in works on the S. American Indians except in some works dealing with the Chaco; I am therefore inclined to assume that the Indians have learnt their use from the whites. Still, this is not absolutely certain, as they are mentioned by so early a writer as Sánchez Labrador from the Mbayá[9].) It is, however, very probable that the Mbayá, even in Labrador's time, had learnt the use of such trumpets from the whites. A C 534 237

The Choroti and the Ashluslay have whistles made of reeds, wood and skulls. A C 534

The simplest whistle is one consisting of a small skull

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[1]) SCHOMBURGK, Vol. 1, p. 154.

[2]) ORDINAIRE, p. 306.

[3]) KISSENBERTH (2), p. 90.

[4]) PISO ET MARCGRAV, p. 271.

[5]) OVIEDO Y VALDÉS, Vol. 2, p. 250.

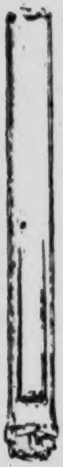
[6]) COBO, Vol. 4, p. 220.

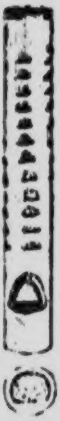
[7]) AZARA (2), p. 150.

[8]) POHL, p. 401.

[9]) »Mientras beben los convidados tocan una corneta, cuyo ronco sonido aturde y amedrenta. No es otra cosa esta bocina, que un cuerno de vaca, ó un calabazo largo, agujereado, y por boquilla un cañuto de caña con su lengüeta, al modo de las trompetillas que hacen los muchachos.» Vol. 2, p. 4.

[text continues on p. 179]





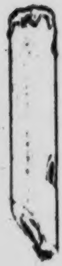


Fig. 50. Mouthpiece of reed for a trumpet. Choroti. G. M. (D. 929) $^{2}/_{3}$.
Fig. 51. Reed whistle. Choroti. G. M. (D. 788) $^{1}/_{3}$.
Fig. 52. » » » » (D. 787) $^{1}/_{3}$.

2: Nordenskiöld E-5 (1908-1909) 1919

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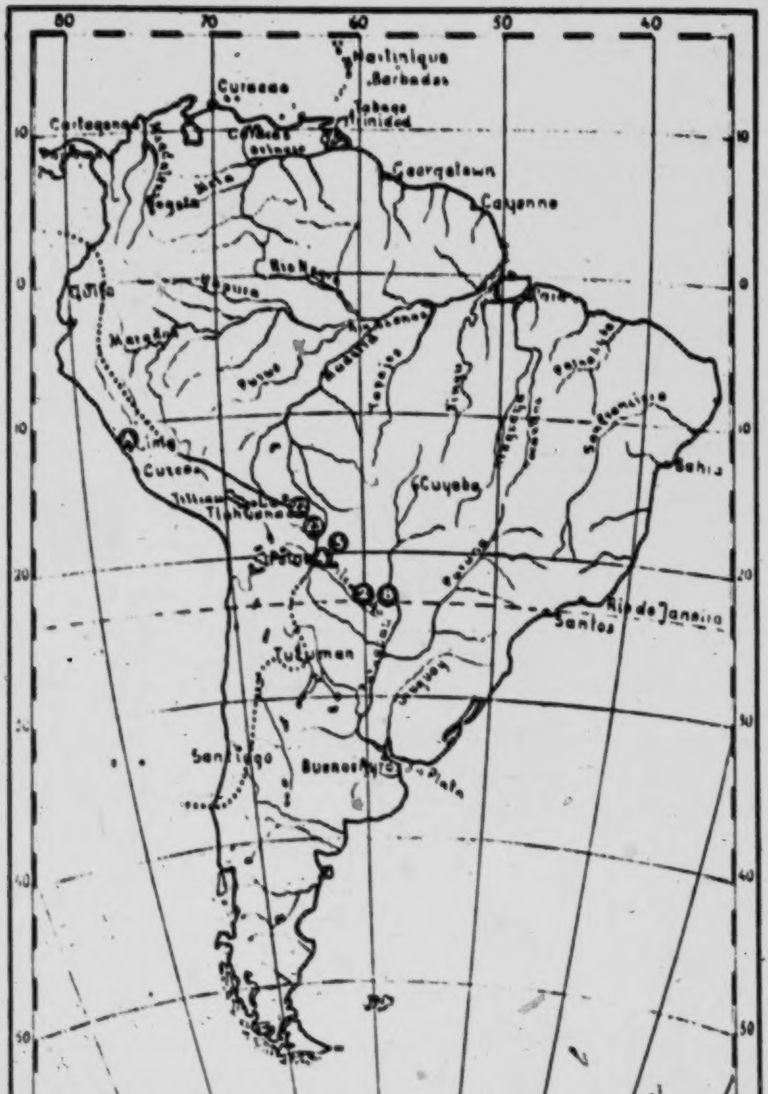
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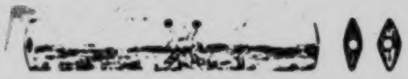
Map 32. The Distribution of the Long Whistle.



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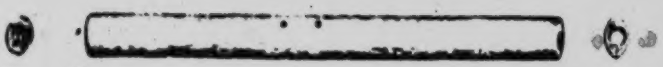

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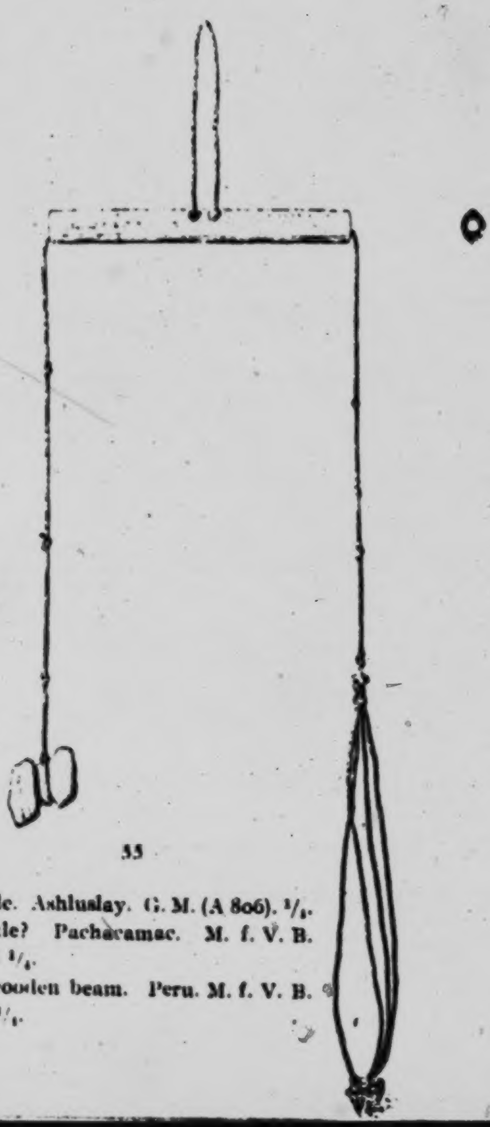

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Fig. 53. Wooden whistle. Ashluslay. G. M. (A 806). 1/1.

Fig. 54. Wooden whistle? Pachacamac. M. f. V. B. (V. A. (40214) 1/4.

Fig. 55. Scales with wooden beam. Peru. M. f. V. B. (V. A. 35965) 1/4.

in which all openings have been stopped with wax except the occipital cavity, which is used for whistling. I have seen such whistles among the Mataco and the Chimane, as well as among the tribes mentioned above. KOCH-GRÜNBERG1) mentions them from the Tucáno and Kobéua, WHIFFEN2) from the Indians on the Rio Yapurá and the Rio Içá.

A type of whistle which the Chaco Indians have plainly received from the mountain area of civilization (Map 32) is the wooden whistle represented in Fig. 53. The method of use is to hold the whistle vertically from the mouth and to blow into the upper hole while the lower hole is covered by the finger. I have found whistles of this kind among the (1) Ashluslay, (4) Chiriguano, (5) Chané, (23) Churapá, and (22) Yuracáre. In the Gothenburg Museum we have a similar whistle also from the (8) Lengua Indians. HAWTREY also mentions them from this tribe. A comparison of the whistles here illustrated with the object found at (A) Pachacamac on the Peruvian coast makes it clear that the latter is a thing of exactly the same kind as the one now used by the Indians of the Gran Chaco. It is, moreover, plain that this object was originally but the beam of a pair of Peruvian scales. (Fig. 55) Exactly as we ourselves, once upon a time, in our young days at least, amused ourselves by whistling on a key, the Indians used the hollow beam of their scales as a whistle. This use of the scale-beam evidently spread to the tribes east of the Andes who are fond of whistling but have no need for scales. Genuinely Indian scales and balances are no longer to be found in S. America, but the scale-beam of the old weighing-scales, degenerated into the form of a whistle, still exists among several tribes. This is an amusing instance of the manner in which the function of an object can be changed.

Nearly every young (1) Choroti and (2) Ashluslay man carries a small round wooden whistle. (Fig. 56). One sees

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1) (2), Bd. 1, p. 302.

2) p. 211.

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whistles of this kind, though less frequently, among the (6) Mataco[1]). I have also seen them among the (4) Chiriguano, (5) Chané, (3) Tapiete, (23) Churápa and (22) Yuracare.—Grubb[2])

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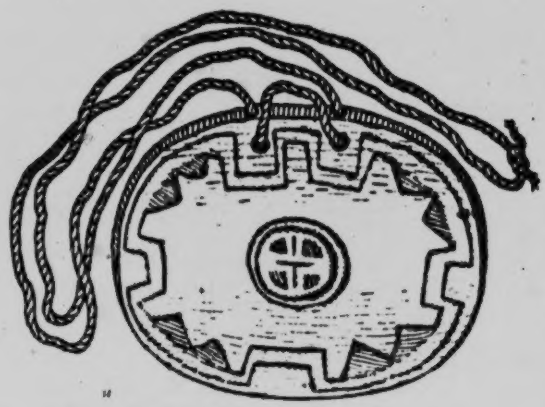

Fig. 50 a. Wooden whistle. Choroti G. M. (D. 793) 1/1.

mentions them from the (8) Lengua and Campana[3]) from the (9) Toba. This type of whistle, therefore, occurs within a continuous area along the Andes and in the Chaco. (Map

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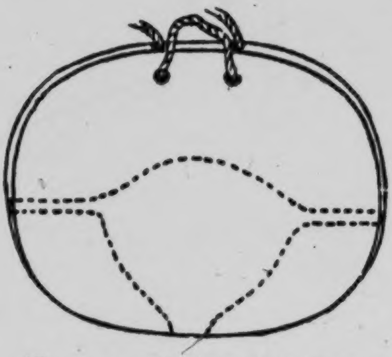

Fig. 50 b. Section of the same.

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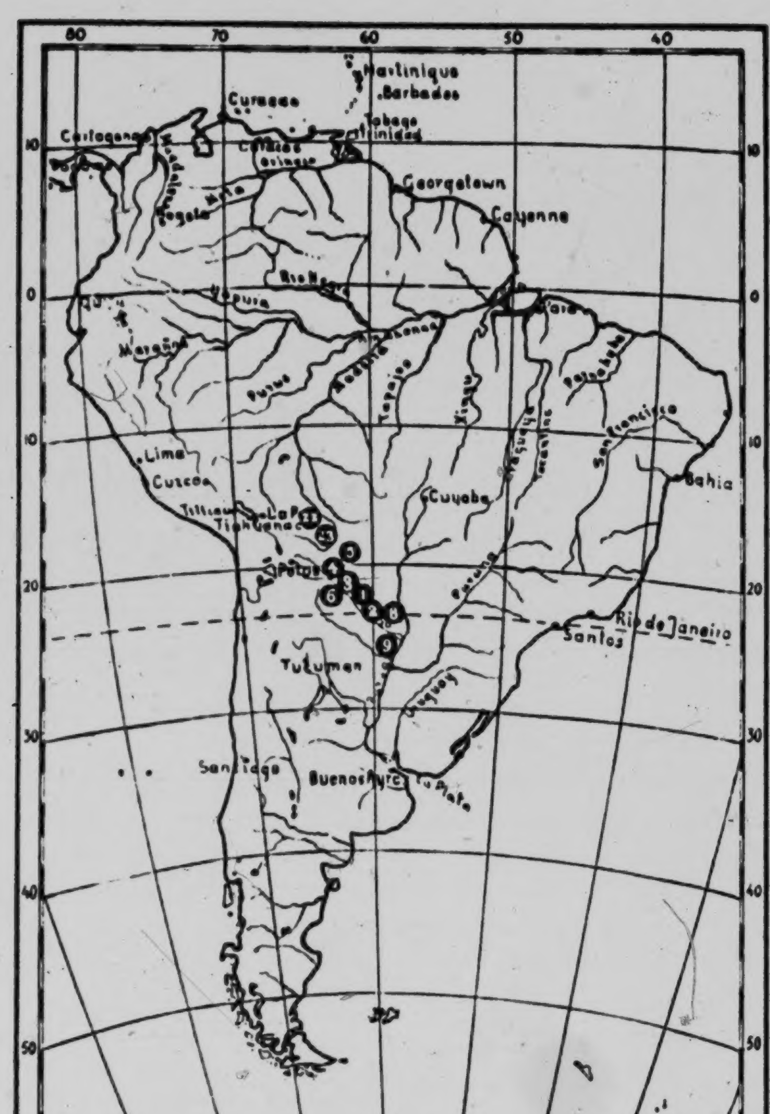
[1]) R. M. (03. 3. 500).

[2]) p. 75.

[3]) (2). p. 316, fig. 10 b.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Map. 33. The Distribution of the Round Whistle.

000 33) I have looked for these whistles in the vast archaeological collections from the Peruvian coast-lands possessed by the Berlin Museum of Ethnology without finding any. Nor is there any mention of them from those places in the literature to which I have had access. Nevertheless I think it very probable that we have here a culture-element which has come to the tribes east of the Andes from the mountain area of civilization. Moreover, I think it extremely probable that these whistles will, in the future, be found in the Peruvian coast-lands. Its western origin I conclude from the uniqueness of its area of occurrence, which is now exactly co-terminous with that of the above-mentioned whistles of the scale-beam type.

It is of interest to notice that the ornamental carving of these wooden whistles is everywhere very similar except among the Yuracáre[1]).

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The flutes found among the Choroti and Ashluslay are very simple. They are made of reeds and much resemble those which Mead[2]) has depicted from the coast-tracts of Peru, though the latter are mostly made of bones. In the area explored by me, except among the tribes of the Chaco, I only know of them from the Yuracáre. Similar flutes are mentioned and illustrated by Koch-Grünberg[3]) and Whiffen[4]) from N. W. Brazil The Gothenburg Museum possesses specimens from the Arecuna and other tribes in Guiana[5]). The Karajá have no flutes[6]). The flutes in different parts of S. America are too little known for me to venture to express any

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[1]) Nordenskiöld (5), p. 25. [2]) Pl. 5.

[3]) (2), Vol. 1, p. 301, fig. 181 and 182. [4]) Page 211.

[5]) The Liljewalch-Thulin collection. G. M.

[6]) «The Karajá Indians are not rich in musical instruments. They have only signalling trumpets, small whistles and tortoise-shell scrapers; rattles serve as the accompaniments of songs. And that is all.» This dearth seems strange, as the Karajá are fond of singing and sing well, and seem to have considerable musical talent.» Krause, p. 315. The Cháma, Atsahuaca, and Tambopata-Guarayo have no musical instruments, nor have the tribes of Tierra del Fuego.

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Ashlusly SK5

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534

opinion as to the place whence the Choroti and Ashluslay have received their flutes.

In the following table I give a review of the area of occurrence of the musical instruments found among the Choroti and Ashluslay within the area studied by me. I have included the pan-flute, which does not occur among the tribes dealt with here.

	Number on the Map.	Rattlegourd.	Skin-drum.	Trumpets.	Whistle Fig. 53.	Whistle Fig. 56.	Musical bows.	Skull whistles.	Flutes of the Chaco type.	Pan flutes.	Reed whistles.	Bone whistles.	Flutes in general.	Rattles made from fruit rinds and claws of animals.
Ashluslay	2		|	?										
Atsahuaca														
Aymara	19	—	+											
Chacobo		—	—	—			—							
Chama		—												
Chané	5		|											
Chimane		—	—		—									
Chiriguano	4	—								?	—			
Choroti	1	|	|											
Churápa	23	—	O¹)											
Guarayú (Pauserna)		—	—				—				—			—
Huanyam		—	—		—		●							
Huari		—	—											
Mataco	6	|	|	|										
Quichua	18	—	|	—										—
Tamb.-Guarayo		—	—	—			—							—
Tapiete	3	|	|	?										
Toba	7,9	|	|	?										
Yamiaca		—	—	—	—								—	
Yuracáre	22	—	—	—	|									

¹) O received from the whites.

Ashluslay SK5

XXIII.

Trophies.

A C 727 In the year 1909, in the Chaco, I succeeded in acquiring a scalp from the Mataco Indians (the scalp of an Ashluslay Indian) and one also from the Ashluslay Indians (the scalp of a Toba-Pilaga). I also learned that the Choroti take scalps. FRIEDERICI has written a comprehensive and excellent work on scalping and similar customs in America, which is based on extensive literary studies.

080 He there shows that scalping has two areas of occurrence in S. America1). The one comprises El Gran Chaco, and the other Guiana. Respecting the former he quotes numerous statements from literature on the subject. Among the writers quoted is SCHMIDEL. FRIEDERICI holds that the custom of scalping, in Guiana is post-Columbian. ROTH2) is of the same opinion.

The keeping of whole human heads as trophies is, according to FRIEDERICI, a very widespread custom in S. America. According to his map this custom prevailed in the whole of S. America except in El Gran Chaco, Patagonia, and Tierra del Fuego. The correctness of this statement is not, however, apparent from the text of his work. From this work I formerly got the impression that head-hunting occurred among the highly developed tribes of western S. America, including the Incas, in Eastern Ecuador,

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1) (1) p. 10.

2) (2) p. 4.

and everywhere among the Tupi-Guarani tribes, but not within large tracts of Brazil. Thus, K. v. d. Steinen, who visited completely primitive Indians on the Rio Xingú found there no trophies of this kind. The preservation of the whole head, or of only a part of it, is fundamentally the same custom, so that we can scarcely assume that scalping had its origin in the Chaco. We have to do with an old custom which, as SELER[1]) has shown, even in so specialized a form as that in which the Jivaro practise it, was known in Peru as far back as the Nasca period[1]).

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[1]) (2). See also UHLE.

Ashluslay SK5

XXIV.

Property Marks. (Map. 34).

422 The (2) Ashluslay Indians have property marks on their cloaks.

000 From objects found in the excavations at (A) Pachacamac[1]) we are acquainted with property marks from the (4) Chiriguano[2]) and (12) Mbayá[3]) Indians. MARTIUS[4]) writes of Guaycurú (Mbayá): — «Like some other tribes on the Pampas, the custom prevails among them for the Head of the family to brand some particular figure on the breast of the women, on the cruppers of the horses, and even on the dogs.» The Chiriguano have property marks on their calabashes, which easily get exchanged in the drinking-bouts.

I have here reckoned property marks to be among the elements of culture which the Chaco Indians have received from the mountain civilization, as these are known from pre-Columbian times. Still, they may be derived from the whites who put such marks on their horses and cattle. The whites dwelling in the Chaco, however, as far as I have seen, do not put these marks on their household utensils, as the Indians do.

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[1]) UHLE (2), p. 87, fig. 104.

[2]) NORDENSKIÖLD (11), fig. 6.

[3]) (CADUÉO), BOGGIANI (2), fig. 102.

[4]) p. 230.

2: Nordenskiöld E-5 (1908-1909) 1919

SK6 Choroti SK6

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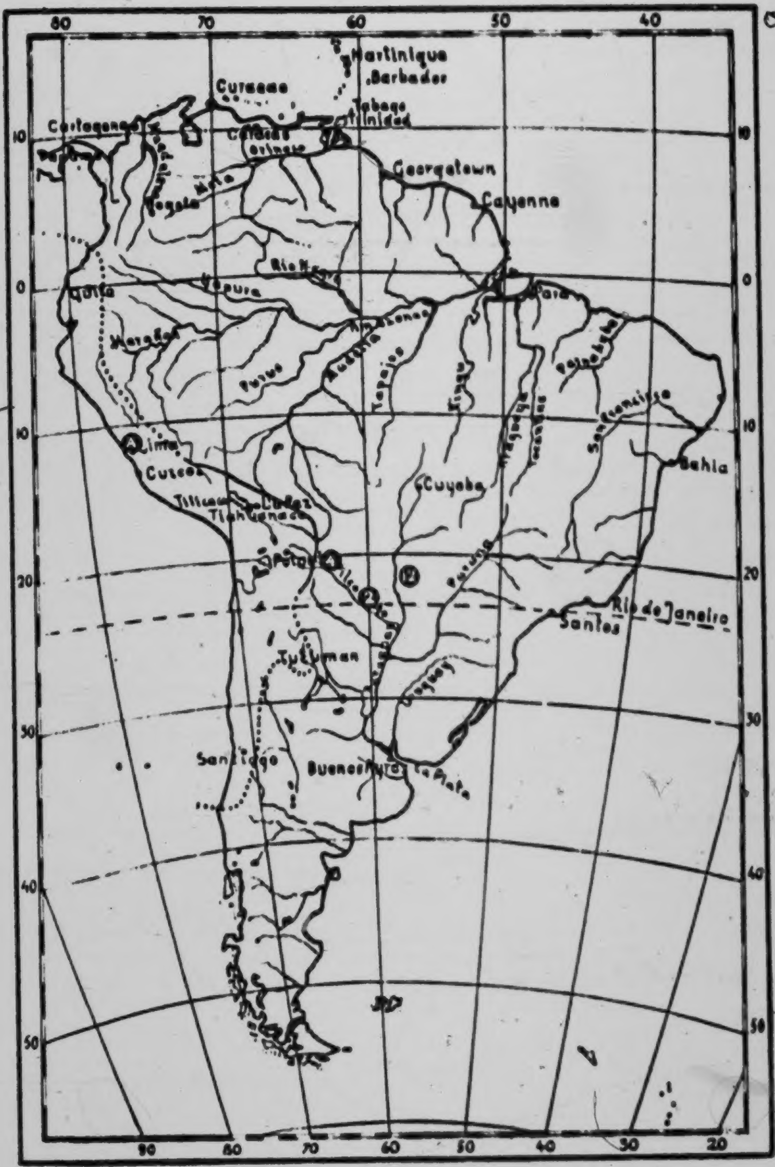
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Martinique
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Curaçao
Tobago
Trinidad
Cartagena
Caracas
Orinoco
Georgetown
Cayenne
Bogota
Meta
Rio Negro
Quito
Yapura
Pará
Marañon
Amazonas
Madeira
Purus
Tapajos
Xingu
Araguaya
Tocantins
Parnahyba
San Francisco
Lima
Cuzco
Bahia
Cuyaba
La Paz
Tiahuanaco
Potosi
Paraná
Rio de Janeiro
Santos
Tucuman
Uruguay
Santiago
Buenos Ayres
La Plata
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Map 34. The Distribution of Property Marks.

XXV.

Miscellaneous Handicrafts.

The manufacture of rope and string and the spinning of yarn.

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In conjunction with Frödin I published a short time ago a work on the twisting and spinning of yarn in S. America. Those who are interested in these branches of Indian handicrafts I beg to refer to this work.

We there showed that, broadly speaking, two methods of spinning can be distinguished in S. America. These we called the Bakaïrí and the Bororó methods. We indicated also the occurrence of some varieties of these methods.

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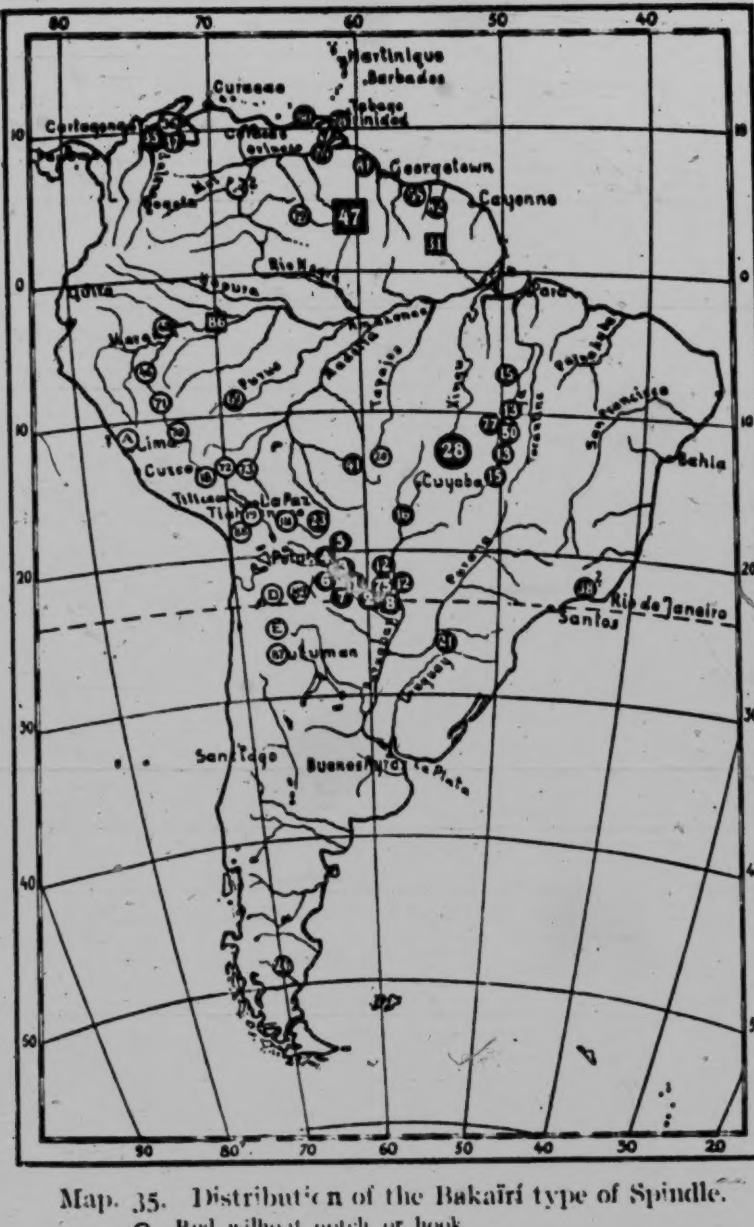
We described the spindle in use among the Bakaïrí as follows: — The typical Bakaïrí spindle is characterized by a spindle rod, the lower end of which is thicker and which is more or less truncated. As a rule it is not very carefully made. The whorl is put onto the rod from above and, consequently, cannot slip off when the spindle is held in a vertical position. The whorl-disc as a rule is near the thick, lower end. The upper end is provided with a slit or a hook, or it may be quite smooth.

000

We characterized the Bororó spindle as follows: — The Bororó type is characterized by its carefully carved and polished rod being spool-shaped. It is usually made of black palm-wood, so-called «Chonta». The spinning-whorl is generally very near one end of the rod and is put on the rod from below. As this spindle is always employed in a more

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6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Georgetown
Cayenne
Bogota
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Rio Negro
Quito
Yapura
Para
86
Purus
Tapajos
Xingu
Tocantins
Parnahyba
San Francisco
Bahia
Lima
Cuzco
28
Cuyaba
Titicaca
La Paz
Potosi
Parana
Rio de Janeiro
Santos
Tucuman
Uruguay
Santiago
Buenos Aires
La Plata
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Map. 35. Distribution of the Bakaïri type of Spindle.

○ Rod without notch or hook.
● Rod with notch.
■ Rod with hook.

Ashluslay SK5

000 or less horizontal position, the rod has no need of a thicker end, like that of the Bakaïrí spindle, to prevent the slipping off of the whorl.

As might be expected in this method of spinning, this type of spindle is never, as is often the case with the Bakaïrí spindles, provided with hooks, knobs, etc. at one end.

A c 283 The Choroti and Ashluslay have typical Bakaïrí spindles which are always provided with knobs at the upper end. On Map 35 I have indicated the distribution of these spindles in accordance with the work of Frödin and myself.

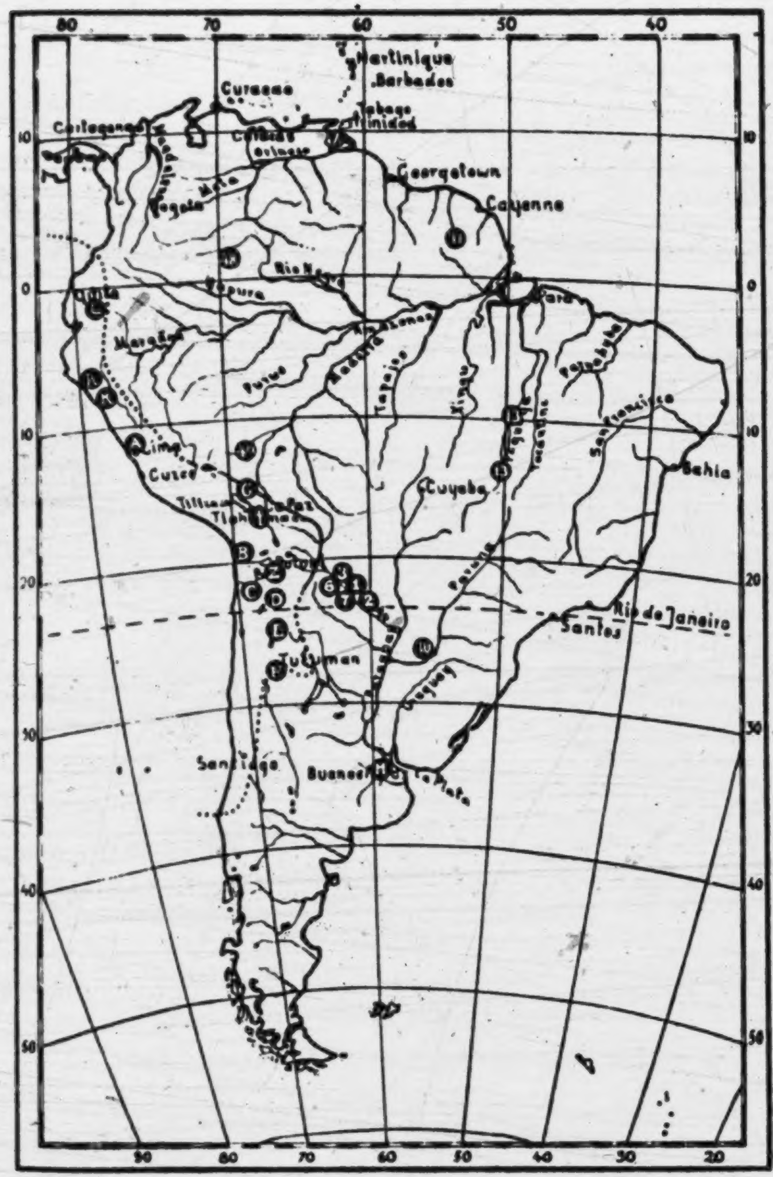
Spindles of the Bakaïrí type are met with among the following tribes:

(28) Bakaïrí, (28) Kamayurá, (28) Mehinakú, (28) Aukuku, (28) Nahuquá, (28) Suyá, (28) Trumaí, (28) Kustenaú, (28) Aueto, (77) Tapirapé(?), (20) Paressi-Kabiši, (15) Kayapó, (13) Karajà, (50) Šavajé, (4) Chiriguano, (21) Cainguá, (8) Lengua, (12) Mbayá, (75) Angaité, (75) Sanapana, (3) Tapiete; (5) Chané, (6) Mataco, (1) Choroti, (2) Ashluslay, (16) Guató, (23) Chúrápa, (41) Guarayú, (Pauserna), (38) Tupinambá (55) Kalina, (31) Ojana and Trio, (47) Patamona, (47) Makusi, (47) Arecuna, (47) Wapischana, (78) Caribs of Trinidad, (79) Yekuaná, (80) Guaiqueri, (81) Indians on the coast of Guayana (82) Arawaks on the Saramacca, (36) Ijca, (36) Köggaba, (35) Chimila, (37) Motilon, (54) Guahibo, (68) Omagua, (86) Yahua, (69) Ipurina, (70) Piro, (71) Sipibo, (46) Conibo, (72) Atsahuaca, (73) Cháma, (18) Quichua, (19) Aymara, (26) Tehuelche, (7) Toba, (87) Mestizos in N. Argentina, (88) Indians of Tacna, (74) Tamanaco and (89) Indians on the Calilegua.

000 In the course of archaeological excavations spindles of the Bakaïrí type have been discovered in the temple of the Sun-maiden at (A) Pachacamac on the coast of Peru, in the (D) Puna de Jujuy and in the (E) Diaguita district of N Argentina.

We see that the Bakaïrí spindles are widely distributed in S. America. In all likelihood this type of spindle came

ODD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Cayenne
Rio Negro
Yapura
Quito
Para
Marañon
Amazonas
Madeira
Purus
Tapajoz
Xingu
Parnahyba
Araguaya
Tocantins
Sao Francisco
Bahia
Lima
Cuzco
Titicaca
La Paz
Tiahuanaco
Cuyaba
Paraná
Rio de Janeiro
Santos
Tucuman
Uruguay
Santiago
Buenos Aires
La Plata
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Map 36. Distribution of the Eyed Needle.

Ashluslay SK5

ODD originally from the mountain area of civilization, as **Frödin** and myself have endeavoured to show. I shall return to this problem later on.

A C 283 The spindles of the Choroti and Ashluslay are, as was mentioned, provided at the upper end with a knob round which the wool to be spun is fastened. This invention does not seem to be a product of the mountain civilization, but to have been one of the few elements of civilization which the Indians of the Chaco have received from the northern and western parts of S. America. Probably it came to the ODD Chaco with the Guarani Indians, since the Arawaks at Mojos north of the Chaco have spindles of the Bororó type. It is indicated on the map which tribes in S. America have spindles of this kind. There are some S. American tribes whose spindles are provided with a hook instead of a knob at the upper end.

Sewing, or the use of the eyed needle.

A C [412]- The Indians of the Chaco have plainly learnt the use of the eyed needle from people of the the mountain civilization. **Rivet** and **Verneau**[1]) have given a summary of the places where eyed needles have been found in archaeological excavations. From this it appears that, previous to its introduction by the whites, the eyed needle in America had a markedly western distribution. (Map 36). **Rivet** and **Verneau** mention the following places where metal needles have been found: — Neighbourhood of Cañaris, Ecuador, Piura, Chuquitanta, Marquez, Ancon, Paumalca (valle de Chiclayo), Trujillo, Huadquiña and Choquequirao in Peru (K, A), (I) Tiahuanaco, (I) Titicaca Island, (G) Quecara, (Z) Tocarji and (Z) Asnapújio[2]) in Bolivia, (D) Casabindo, (E) Santa Maria, (E) La Loma (not far from Puerta del Belen) in Argentina. Rivet and **Verneau**[3]) quote, furthermore the following places for bone needles: — (L) Cañar (Ecuador), (E) La Paya (N.

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[1]) (4) p. 284.

[2]) Only a few of these places are shown on the map.

[3]) (3) p. 252.

Ashlusky SK5

Argentina) and (H) Neighbourhood of Buenos Aires. Wooden needles have been found at (D) Casabindo and (D) Sayate in the Puna de Jujuy, at (C) Calama in the Puna de Atacama[1]) and at (B) Arica[2]). I have found[3]) wooden needles in a grave in a cave at (G) Quearatal in Bolivia and at (G) Corani in Peru.

At (B) Arica UHLE[4]) found large needles of wood and smaller ones of thorn. REISS and STÜBEL[5]) depict a sewing-needle »out of a large thorn» from Arica.

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[4/2]

Among the Indians whom I have visited on my travels the (1) Choroti, (2) Ashluslay, (6) Mataco, (7) Toba and (3) Tapiete use home-made needles. These are made of bones, wood or the thorns of a plant. CREVAUX[6]) mentions bone-needles from (31) Roucoyenne (Ojana), and KRAUSE[7]) found them among the (13) Karajá. I have seen a bone-needle from the (30) Guayaki in the Museum of Ethnology at Berlin. KOCH-GRÜNBERG mentions bone-needles from the (48) Káua on the Rio Aiarý[8]) and the (48) Kobéua on the Rio Cuduiarý[9]); ARMENTIA[10]) from the (49) Araona. K. V. D. STEINEN found no eyed needles among the Indians on the Rio Xingú. From the Mehinakú, one of the Xingú tribes, RADIN[11]) mentions needles consisting of two light, thin pieces of wood held together by very fine fibres. At the upper end a slit is left open.

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[1]) BOMAN, p. 508.

[2]) EWBANK, Pl. 10, fig. 6.

[3]) NORDENSKIÖLD (3), p. 18 and 34.

[4]) (6) p. 12.

[5]) Vol. 3, Pl. 83, fig. 13.

[6]) p. 202.

[7]) p. 206.

[8]) (2) Vol. 1, p. 117.

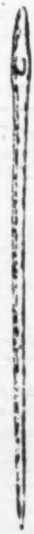
[9]) (2) Vol. 2, p. 166.

[10]) p. 61.

[11]) p. 932.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti
Ashluslay SK5

412
284



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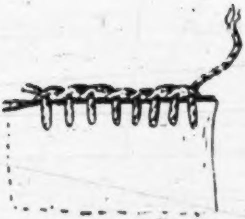

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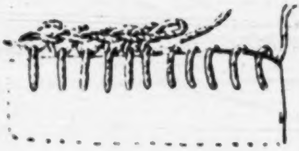

59.

57. Wooden needle. Ashluslay. R. M. (A. 675) $^1/_2$.
58. 59. Specimens showing how leather-bags are sewn. Ashluslay $^1/_1$.
58. R. M. (A. 179).
59. R. M. (A. 533).

The Abipone would seem to have no needles[1]). The Tupinambá were unable to sew[2]). Some tribes have probably learnt the use of the eyed needle from the whites. 000

It seems to me impossible to distinguish from the shape of the needles whether they are imitations of the needles of the whites or not. The needle is an element of culture which the Indians may easily have got to know from the whites. It is also an element of culture which easily disappears under the influence of the whites. Still, I consider it probable that the Chaco Indians had already learnt the use of the needle from the western area of civilization. This holds good not only of the smaller needles (Fig. 57) used for sewing and plaiting, but also of the large needles which the Indians use when fishing.

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[286]

Needles in the Chaco are used in the first place for making Caraguatá bags of different kinds. Thus the netting represented in Fig 60 (4—6) is done with the needle. One seldom sees the joining of two pieces of cloth among these Indians. Now and then they strengthen the end-band of a rent mantle. Holes are darned with the help of needle and thread (see Fig. 28), but usually in very coarse fashion. Smaller or larger bags of skin are often sewn together. Figs. 58 and 59 show specimens of such work.

Knitting and sewing.

A
C
286

While baskets are altogether wanting[3]) among the Choroti and Ashluslay, they do more string work than most of the other S. American Indians.

These bags, etc., have, in part, to take the place of the basket work of other peoples.

Some of this work is plaiting, other knitting. Most of it is sewing. We see from the illustrations what different spe-

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[1]) Dobrizhoffer, Vol. 2. p. 142.

[2]) Soares de Sousa, p. 290.

[3]) The only baskets found here are the fishing-gear mentioned on page 50.

[text continues on p 198]

2; Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti
Mataco SI7
Ashluslay SK5

A
284
286

M
286

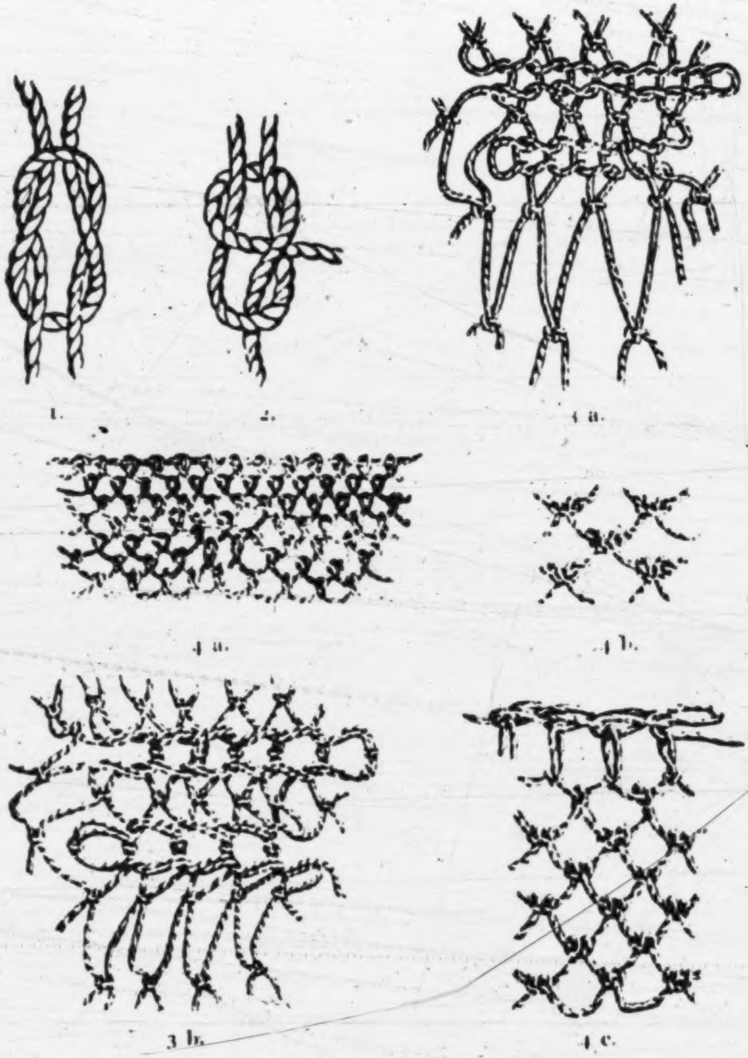

Fig. 60. Specimens of technique in the bags and netting in El Gran Chaco.

1. Reef knots.
2. Sheet-bend.
3 a. R. M. (A. 1538) Ashluslay.
3 b. R. M. (A. 1835)
4 a. R. M. (M. 191) Mataco.
4 b. R. M. (A. 1589). Ashluslay.
4 c. R. M. (A. 1487).

2: Nordenskiöld E-5 (1908-1909) 1919

SK6 Choroti SK6

Mataco SI7

Ashlusla y SK5

A
C
M
286

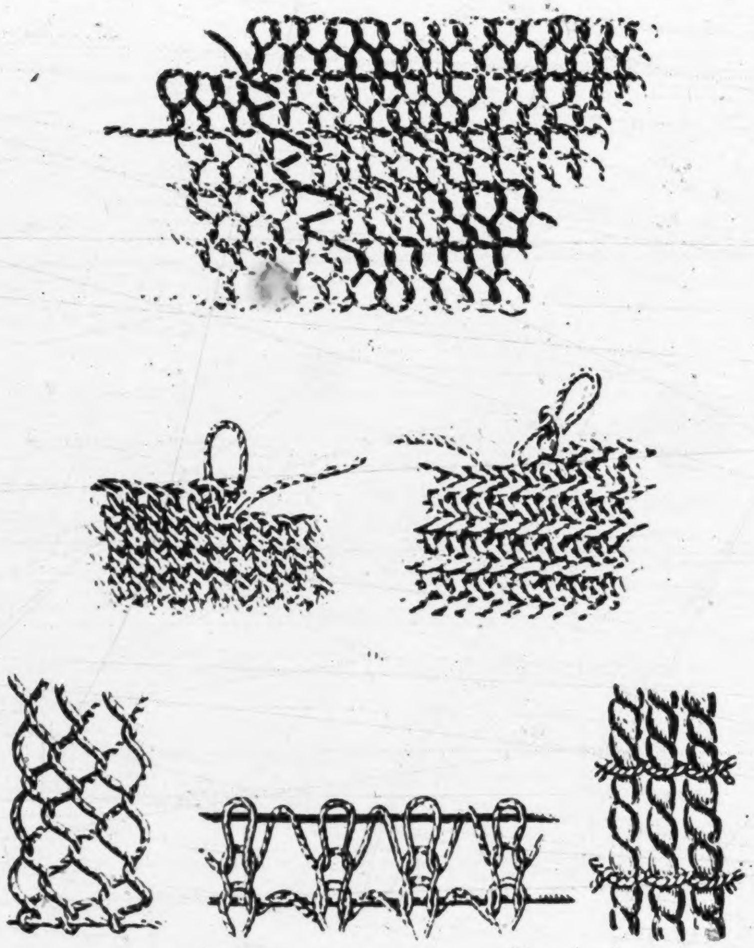

Fig. 60. Specimens of the technique in the bags and netting in El Gran Chaco.

5. R. M. (M. 102) Mataco.
6. G. M. (D. 650). Choroti.
7. R. M. (A. 1404). Ashluslay.
8. G. M. (13.1.400) Mataco.
9. G. M. (A. 1528). Ashluslay.

A
C
286

cimens of technique occur among the tribes dealt with here, and the table on page 200 shows where they occur inside the area investigated by me.

Of these different specimens of technique 1 is used for small bags and 2 chiefly for the large landing-nets; 4 a for small bags and 4 b for hairnets; 5 is above all for the large bags used for carrying; 6 for small bags and for most shirts; 3a and 3b for large bags and for the stockings which serve for protection from the Palometa fish; 8 for small bags; 7 for the sides of a certain form of bag; 9 for small honey-strainers. Specimens 1—7 and 9 I have only seen in work made of Caraguatá, and 8 only in woollen bags.

It would be of very great interest if a study were made of the distribution of the various kinds of knitting and plaiting etc. in S. America. A beginning has been made by RADIN who, however, though the rich material of the Berlin Ethnological Museum was at his disposal when writing his treatise, strangely enough did not examine the specimens of work which that collection contains from the coast lands of Peru, but confined himself to specimens of work carried out by present-day Indians.

Ordinary netting is widely distributed in S. America. It occurs in all the places where the Indians are indicated as using landing-nets and nets. There are two kinds of knots: *reef-knots* (Fig. 60.1) and *sheet-knots* (Fig. 60.2). The Ashluslay and Choroti employ the latter in nets and occasionally for bags, the former in bags only. In addition to the places indicated in this table, reef-knots are found in N. W. Brazil[1]), on the coast of Peru[2]), in Guiana[3]), and among the Lengua[4]). According to KRAUSE[5]) the sheet-knot is in use among the Karajá. It would be extremely interesting if some one would make a map, based on the collections of the great museums, showing the distribution of these and possibly other knots in S. America.

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[1]) G. M. (16. 5. 33) Collection of KOCH-GRÜNBERG.

[2]) G. M. (16. 9. 78).

[3]) G. M. (12. 1. 343). Collection of LILJEWALCH-THULIN.

[4]) G. M. (2134). Collection of GREBST.

[5]) Fig. 136 b.

A
C
286

The Choroti and Ashluslay knit their nets with mesh-sticks (Fig. 61) like those in use in Sweden. I have, moreover, seen the mesh-stick in use among the Mataco, Toba, Chiriguano, Chané and Tapiete. I have not seen it among other tribes, but I would not venture to assert definitely that it does not exist among them.

Fig 61. Mesh-stick. Ashluslay. R. M. (A. 102). 1/2.

KOCH-GRÜNBERG[1]) mentions it from N. W. Brazil. The Lengua make their nets without a mesh-stick; as also the Karajá[2]) and the Ona[3]). Objects have been found on the Peruvian coast which may be mesh-sticks, as for instance at Pachacamac[4]).

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The mesh-stick is one of those elements of culture whose distribution is too little known for us to venture to draw conclusions regarding its source.

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[1]) (2) Vol. 2, p. 37.

[2]) Grubb, p. 68.

[3]) KRAUSE, p. 288.

[4]) GALLARDO, p. 203.

[5]) SQUIER, p. 96.

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286

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti SK6
Ashluslay SK5

[p. 200]

Table showing the distribution of the different kinds of technique in the making of bags and nets. The numbers refer to figures 60.1 - 60.9.

Technique	No. on map	1.	2.	3.	4.	5.	6.	7.	8.	9.
Ashluslay	2.	R.M. A. 1475.	R.M. A. 1538.	R.M. A. 1538. R.M. A. 1835.	R.M. A. 1465.	R.M. A. 1447.	R.M. A. 1473.	R.M. A. 1494.	—	G.M. A. 1528.
Atsaltuaca	32.						—	—	—	+
Aymara	19.	+ ²)				—	—	—	—	—
Chacobo	62.	—	—		—		—	—	—	+
Cháma	73.	—			—		—	—	—	+ ?
Chané	5.	R.M. P. 121.	—				—	—	—	R.M. P. 126.
Chimane	24.	G.M. 15.1. 914.					—	—	—	—
Chiriguano	4.	R.M. E.666.	R.M. E.678.			—	—	—	—	R.M. E.614.
Choroti	1.		G.M. D. 651.	G.M. D. 660.	G.M.¹) D. 239.	G.M. D. 252.	G.M. D. 650.	G.M. D. 241.	G.M. D. 239.	—
Guarayú (Mission).	40.	—		—		—	—	—	—	+
Guarayú (Pauserna).	41.	—				—	—	—	—	G.M. 15.1 845.
Huanyam	43.	—	—			—	—	—	—	G.M. 15.1 601a
Huari	64.	—	—		—	G.M. 15.1. 435.	—	—	—	G.M. 15.1.416.
Mataco	6.	—	R.M. M. 232.	R.M. M. 1140.	R.M. M. 191.	R.M. M. 1036.	R.M. M. 1136.	—	G.M. M.G. 65.	—
Quichua	18.	+	—			—	—	—	—	—
Tambopata-Guarayo	6X	—	—	—	—	—	—	—	—	—
Tapiete	3.	R.M. Lt. 203	R.M. Lt. 257.	R.M. Lt. 257.	—	R.M. Lt. 179.	R.M. Lt. 186.	G.M. L. 26.	—	R.M.L.32
Toba	7.9.	G.M. 580.	R.M. To. 24.	R.M. To. 24.	—	R.M. To. 47.	—	—	—	—
Tsirakua	93.	—	—	—	—	R.M. Z. 35.	—	—	—	R.M. Z. 32.
Yamiaca	63.	—	—	—	—	—	—	—	—	+
Yuracáre	22.	+	—	—	—	—	—	—	—	—

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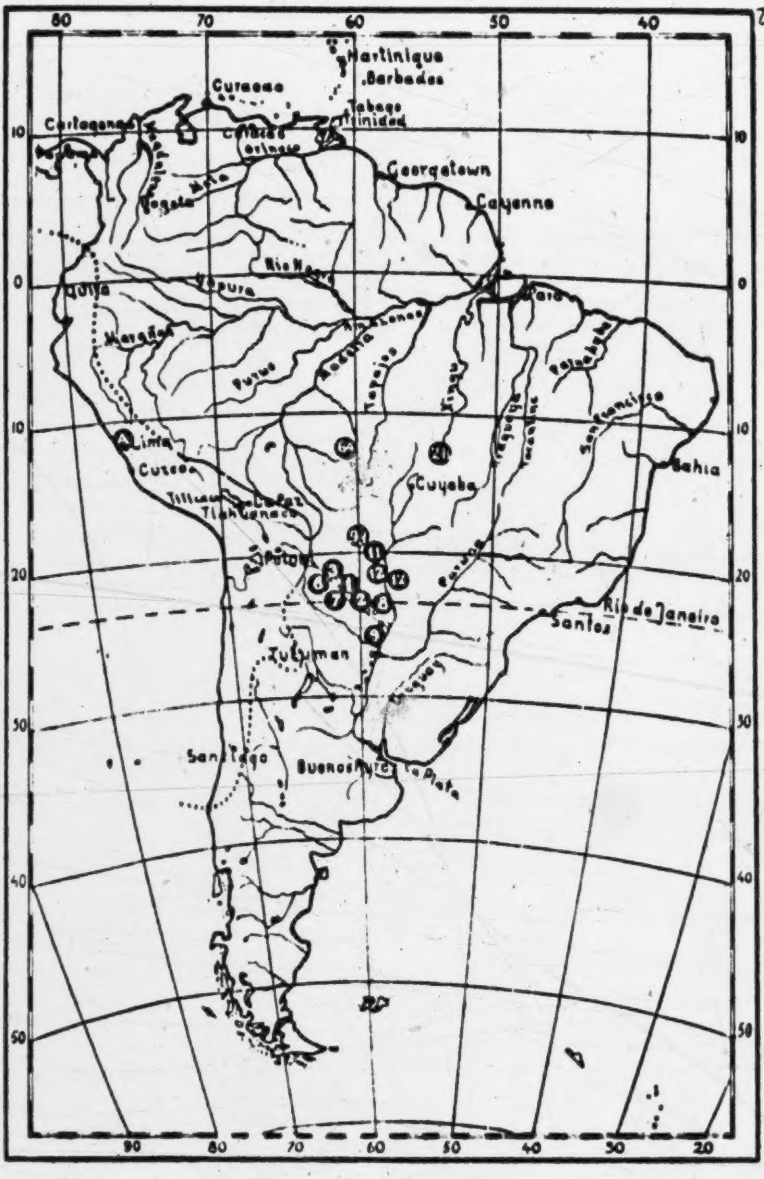
¹) The Choroti, when they mend cloth use a variation of this technique. ²) Öhrvall, p. 63.

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6

DOD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Yapura
Para
Marañon
Amazonas
Purus
Tapajos
Xingu
Araguaya
Tocantins
Parnahyba
San Francisco
Lima
Cuzco
Cuyaba
Bahia
La Paz
Tiahuanaco
Potosi
Rio de Janeiro
Santos
Tucuman
Uruguay
Santiago
Buenos Aires
La Plata
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Map. 37. Distribution of Technique 5. (Fig. 60,5).

000 Technique 4, in which a needle is used, is said by **RADIN** to occur, in addition to the Chaco, only in N. W. Brazil (tribes on the Rio Negro and Rio Yapurá) and among the Botokudo. It occurs also among the Guayaki[1]), Ijca[2]), Köggaba[3]), Motilon[4]), Araucanians[5]), and the Jivaro and other Indians in Ecuador[6]) and in the oldest graves at Arica[7a]).

The variation 4b from technique 4 employed in head-dresses has also been in use in Peru. In the Gothenburg Museum this technique can be seen exemplified in a small bag from the vicinity of Lima[7b]).

Technique 5 (Map 37), which is likewise executed with the needle, is mentioned by Radin[8]) from the (28) Romuro tribes (Rio Xingú) as well as from the Chaco. In the National Museum at Stockholm a very similar technique may be seen in a bag from (A) the coast of Peru[9]). It occurs among the (11) Chamacoco[10]), (8) Lengua[11]), and (12) Mbayá(?)[12])

Techniques 3 and 6 do not occur elsewhere than in the Chaco and must, therefore, be reckoned among the elements of civilization peculiar to the Chaco. Technique 6 and probably 7 too are executed with the needle. Technique 7 is the same as the Guaraúno Indians employ for so-called « purse-net » hammocks.

Technique 9 is the one usually employed for most hammocks by Indians from the Chané tribe in the Chaco to the Indians on the coast of Guiana.

[1]) M. f. V. B.

[2]) G. M. BOLINDER collection.

[3]) G. M. BOLINDER collection.

[4]) BOLINDER (2), fig. 26 b.

[5]) MASON p. 535.

[6]) UHLE (1). Vol. 2. Plate 9.

[7a]) G. M. SKOTTSBERG Collection.

[7b]) G. M. (P. 1).

[8]) P. 948.

[9]) R. M. (1910, 19.22).

[10]) BOGGIANI (1), fig. 42.

[11]) G. M. (2135).

[12]) SÁNCHEZ LABRADOR. Vol. 1, p. 271.

It is also used by the Tsirakua of the northern Chaco in 000 Caraguatá mantles and, no doubt, belongs to the elements of culture which the Indians of the Chaco received from the north or east.

In all likelihood techniques 4, 5, and 6 were found among the Mbayá in the 18 th century. SÁNCHEZ LABRADOR¹) writes as follows of bags in this tribe: — «Hay unas de anillos ú ojos grandes, y otras de pequeños y algunas del todo cerradas.»

The existence in the Chaco of so many kinds of knitting is probably connected with the cultural influence from the area of civilization in western S. America. Proof of this can however, only be adduced after study of the specimens of the kinds of work found there. I am afraid that plain specimens of knitting, not possessing aesthetic value, are not always brought up to the light at the excavations in the coast lands of Peru. On this account it is important that future expeditions should collect such material in those parts. The plundered excavation areas must certainly have still a great deal to offer in this respect.

Plaiting of rope and string.

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Both the Ashluslay and the Choroti have some rather peculiar plaited bands, strings, etc. It being impossible to draw any anthropogeographical conclusions from these at present, owing to the lack of comparative material, I would prefer not to deal with them here.

Brush and Broom-making.[a]

There is no work on Indian brooms.[b] As I have already 000 remarked, they are a culture-element which the Indians received from the area of civilization in western S. America.

¹) Vol. I, p. 271.

[a] [i.e. tassel-making. -Axelrod]

[b] [i.e., tassels. -Ax.]

2: Nordenskiöld E-5 (1908-1909)1919

SK6 Choroti SK6

Ashluslay SK5

Mataco SI7

Weaving.

A
C
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The tribes from whom I have made collections on my journeys all know how to weave, with the probable exception of the Siriono. There are in S. America a number of Indians who do not weave. Among these are the Tierra del Fuego tribes and some Gês-peoples.

Many of the Indian tribes I have visited only weave bands. Such are the Chacobo, Huanyam, Huari and Yuracáre. Weaving with ornamental borders (Fig. 27) is only found in the Chaco, and it is evident that weaving among those tribes is on a much higher plane than among the tribes north of Sta. Cruz de la Sierra. This is plainly due to the influence of the mountain civilization to the west. Specimens of weaving with these borders are in my collections from the Choroti, Ashluslay, Chané, Mataco, Quichua and Aymara. They are widely met with in the old excavations in Peru. Among Indians now living I know of such fabrics among the Mbayá[1]) and the Lengua[2]), besides the tribes mentioned here. This is manifestly an element of civilization received by the Choroti and Ashluslay from the old area of civilization in the west.

It is remakable that we find in the Chaco, too, among the (2) Ashluslay bands woven according to the Kelim technique with open slits (Fig. 64). Otherwise this technique is not known among Indians now living in S. America, but only from the (A) old area of civilization in the west. (Map 38).

I have no loom in my collection from the Choroti or Ashluslay. From the latter tribe I photographed one which I had not the opportunity of acquiring[3]).

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From the Mataco, who are closely connected with these tribes, I have several looms of which two distinct types are here illustrated. As we see, the warp is drawn differently in each of these. In the loom (Fig. 63) the warp-threads run

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[1]) BOGGIANI, fig.

[2]) GRUBB, fig.

[3]) See »Indianerleben», fig. 52.

[text continues on p. 208]

2: Nordenskiöld E-5 (1908-1909) 1919

SK6 Choroti SK6

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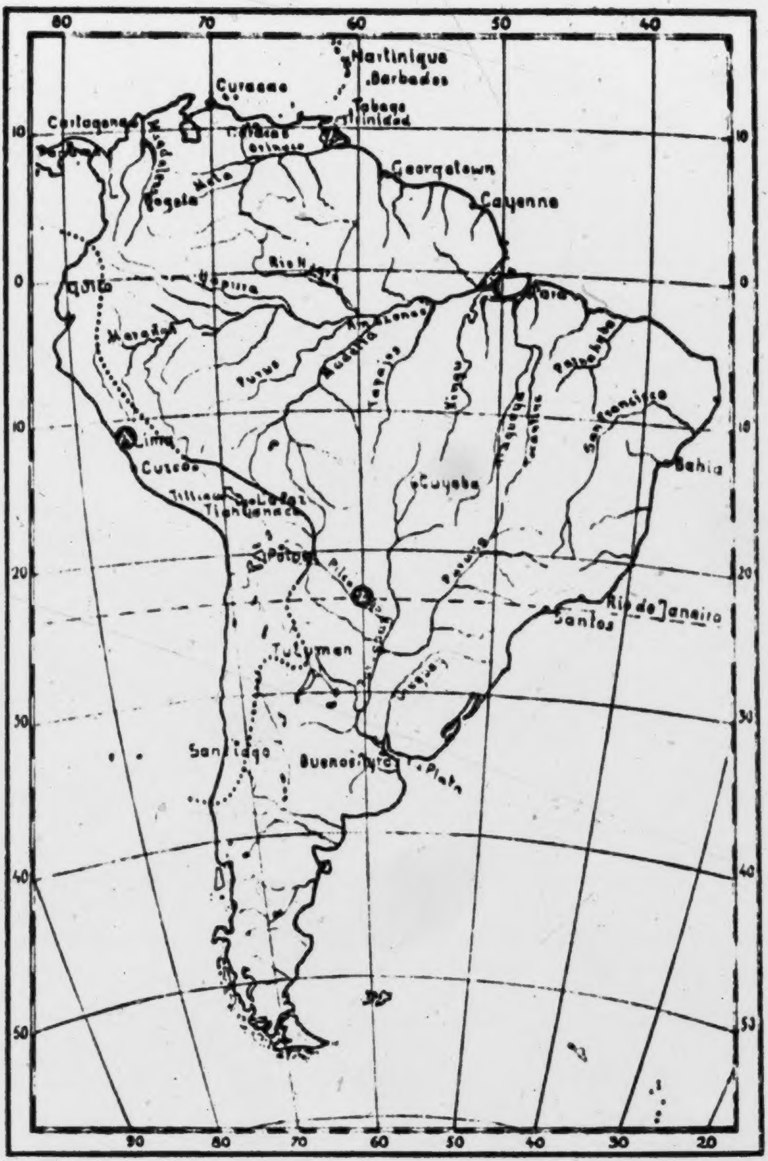
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Para
Amazonas
Marañon
Purus
Madeira
Tapajos
Xingu
Parnahyba
Tocantins
Araguaya
San Francisco
Lima
Cuzco
Cuyaba
Bahia
Titicaca
La Paz
Tiahuanaco
Potosi
Pilcomayo
Parana
Rio de Janeiro
Santos
Tucuman
Uruguay
Santiago
Buenos Ayres
La Plata
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Map. 38. The Distribution of the Kelim Technique with Open Slits.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti
Mataco SI7

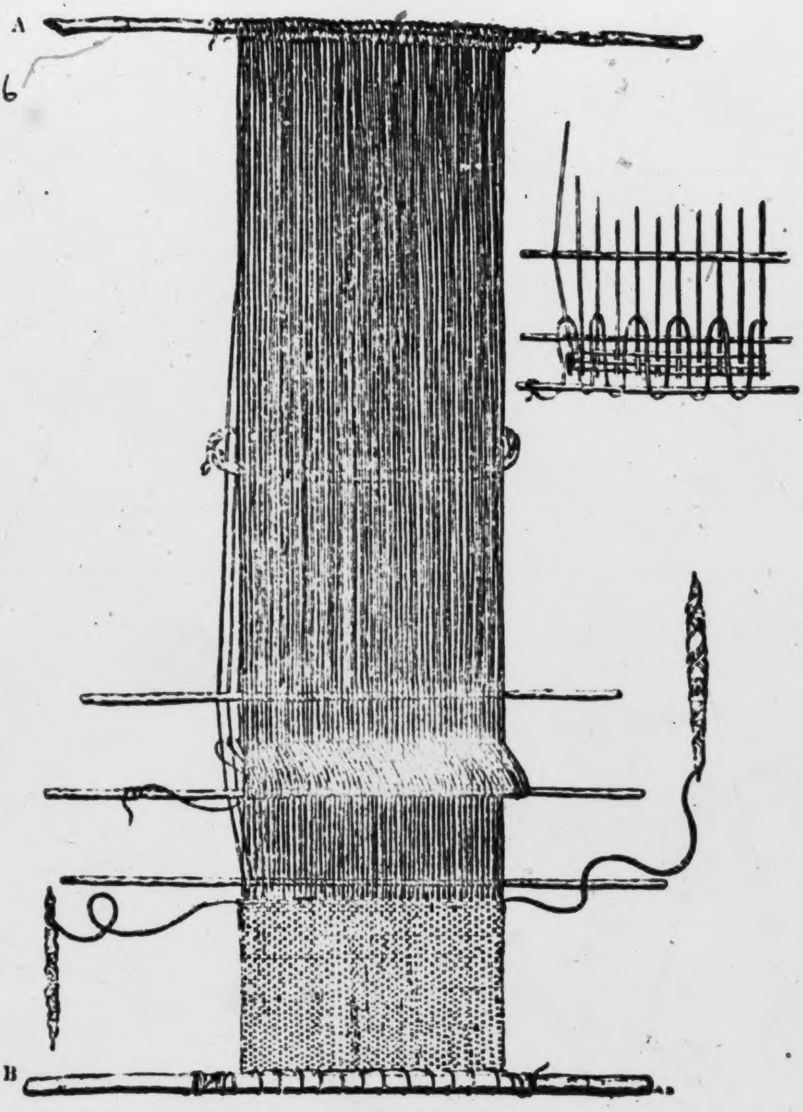

Fig. 62. Loom. Mataco R. M. (M. 1231). The warp in the diagram somewhat shortened. Full length of the loom 2.21 metres.

2: Nordenskiöld E-5 (1908-1909) 1919

SK6 Choroti

Mataco SI7

Ashluslay SK5

A

M

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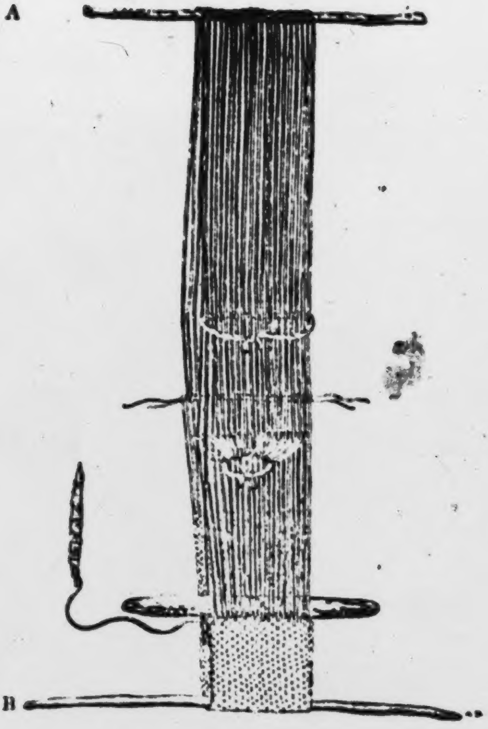
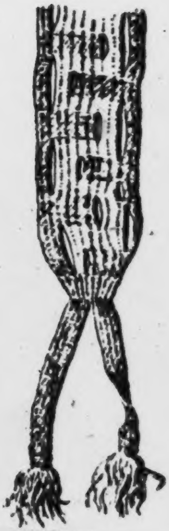
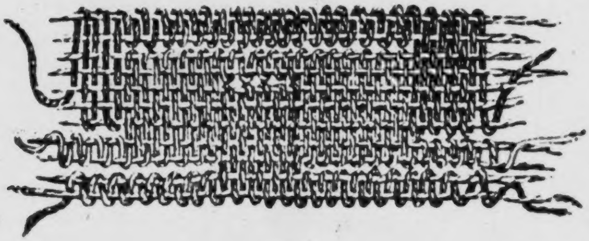


63.



64 a.



64 b.

Fig. 63. Loom. Mataco R. M. (M. 1230). The warp in the diagram somewhat shortened. Full length of the loom 1.33 metres.

» 64 a. Band woven in the Kelim technique with open slits. Ashluslay.

» 64 b. Enlargement of a.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti
MAtAco SI7

M
286

round the pins A and B so that the fabric takes the shape of a ring when complete. The warp was drawn thus in the Ashluslay loom I saw, and this is also the case in some looms of the Chané and Chiriguano and in all the looms of the Yuracáre, Chacobo and Guarayú (Pauserna). I have looms from the tribes named in my collections. MAX SCHMIDT[1]) has described a loom of the same type from the Paressi-Kabiši, and, according to the same author, this kind of loom is also found among the Arawaks on the Rio Negro and among the Tereno Indians. MAX SCHMIDT writes of this type of loom: »After my late experiences among the Paressi-Kabiši I am more and more of the opinion that we must consider the type of loom in question to be an appurtenance of the old Arawak civilization which, as the latter progressed, passed on to more primitive tribes.» The fact that such looms, as far as I know, have not been found in Peru[2]) corroborates this view, as also the fact of their occurrence in N.E Bolivia, where most of the Peruvian culture-elements occurring in the Chaco are wanting[3]). The introduction of this type of loom from whites or negroes appears to me quite out of the question.

It is also used by the Lengua[4]). We know that the Arawaks in the Chaco, formerly at least, were great weavers, from the accounts of old authors[5]).

The loom depicted in Fig. 62, on the other hand, is exactly like the Peruvian loom which MAX SCHMIDT has de-

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[1]) (4) p. 214.

[2]) See looms: MAX SCHMIDT (6) and CRAWFORD.

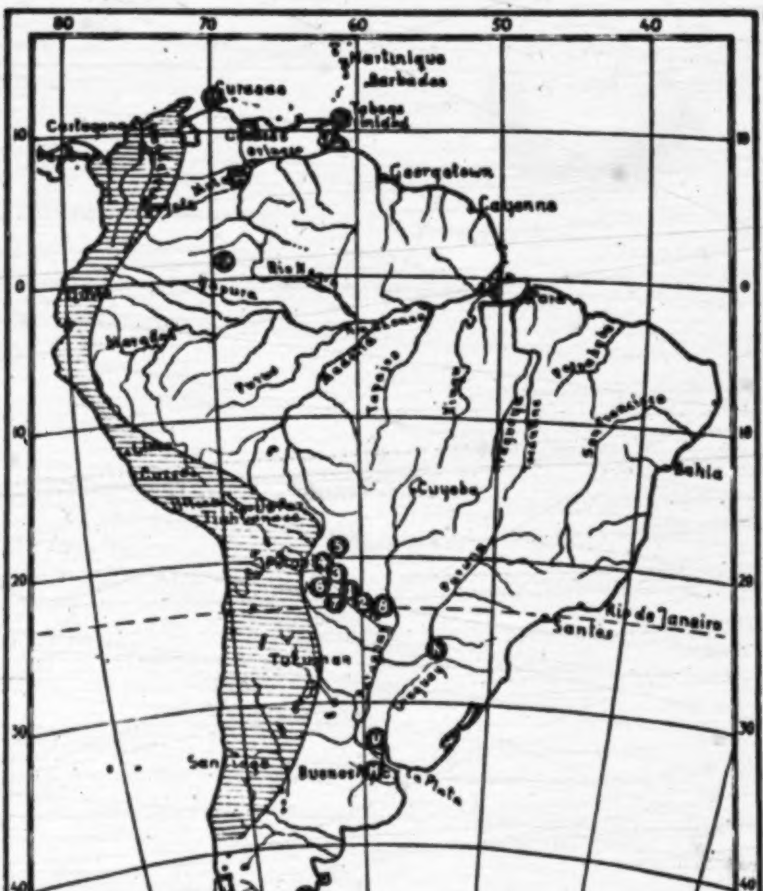
[3]) Looms from present-day Indians in S. America, judging by the few comparisons made by Max Schmidt, would seem to be uncommon in the Ethnological Museum of Berlin. And I suppose the same holds good for most museums.

[4]) GRUBB, Pl. on Page 66.

[5]) »Las Guanas son las principales hilanderas y tejedoras de sus bellas mantas». Aguirre, p. 478.

[text continues on p. 211]

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6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Yapura
Marañon
Purus
Madeira
Tapajos
Xingu
Para
Cuyaba
Bahia
Rio de Janeiro
Santos
Tucuman
Santiago
Buenos Aires
La Plata
Uruguay
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Fig. 39. The Distribution of Earthenware Vessels with Handles.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti
Ashluslay SK5

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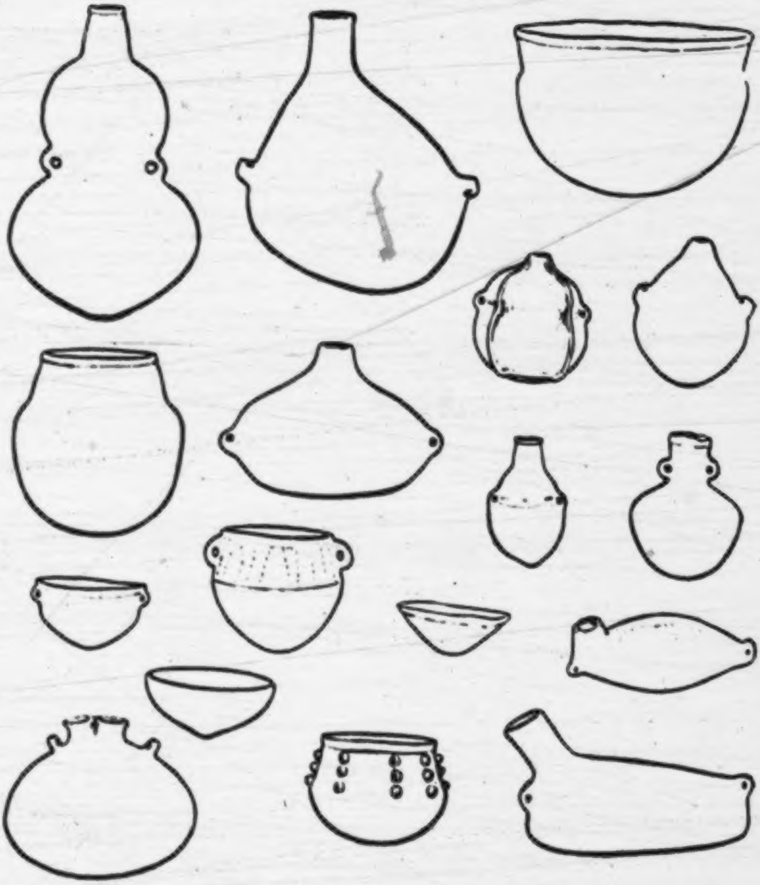

Fig. 65. Types of the earthenware vessels of the Ashluslay, showing the varying shape of the pottery of this tribe.

picted from Pachacamac[1]). In my travels I have only seen it among the Mataco. M 286

I am sorry I do not possess in my collections a loom with half-complete fabric with ornamental borders, nor a half-complete band in the Kelim technique. Since the «Arawak» loom is universally found in the Chaco, I think it more likely that the Choroti and Ashluslay originally learned the art of weaving from the Arawaks (Chané) than that it passed on to them from the mountain civilization. It is, however, certain that their weaving industry developed under the influence of the Mountain civilization. ODD

Pottery.

All the tribes I have visited on my journeys possess earthenware vessels made by themselves, except the Cháma and the Tambopata-Guarayo, who are identical with or nearly related to them. PATER SCHMIDT[2]) mentions the following tribes as not having any pottery: — Kayapó, Botokudo, Ona, Yahgan, and Alikuluf. The Tehuelche no longer have any pottery, though they had formerly. With the exception of the last-mentioned it is, therefore, only the lowest tribes who are without pottery. The absence of pottery among the Tehuelche is due to their life being so bound up with that of the horse; fragile earthenware is unsuitable for an equestrian people.

The Chaco tribes here dealt with build up their earthenware vessels in layers out of clay ropes[3]). This method of shaping the vessels I have seen among the following tribes: — Choroti, Mataco, Ashluslay, Chiriguano, Chané, Quichua-Mestizos and Huari; and this is the usual method everywhere in S. America where the pottery is uninfluenced by white civilization. PATER SCHMIDT[4]) mentions this method from several tribes in different parts of S. America. The A C 323

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[1]) (6), p. 7.

[2]) p. 1024.

[3]) See »Indianerleben», p. 122.

[4]) p. 1027.

Ashluslay SK5

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vessels are polished with wooden tools, specially made for this purpose, and sometimes also with the tails of the Tolypeutine armadillo[1]).

The Chaco Indians make earthen vessels of a good many shapes (Fig. 65). Of these they have got one at least from the mountain civilization, viz., the waterpot. (Fig. 45). I have, however, already dealt with this in other connections (See above, page 146).

A good many of the earthen vessels of the Choroti and occasionally of the Ashluslay also are provided with handles (Fig. 65). The distribution of vessels of this kind indicates that the handle is an invention which the Choroti and Ashluslay have obtained from the Indians of the western area of civilization.

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I have found earthenware vessels with handles (Map 39[2]) at Samaipata in the neighbourhood of Sta Cruz de la Sierra, at Caipipendi in the district of the Chiriguano Indians, at Calilegua in N. Argentina, in the excavations on the border of Peru and Bolivia, in the San Francisco valley in N. Argentina, at Incallacta and in the Mizque valley between Cochabamba and Sta. Cruz de la Sierra, in the old dwelling-places on the upper Rio Pilcomayo, and at Covendo on the Rio Beni.

On the other hand handles are wanting on the vessels I found in mounds at Mojos, at Guarayos, and in the ancient dwelling and burial grounds on the Rio Guaporé and the Rio Machupo.

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In the following table we see which of the present-day Indian tribes visited by me have got handles on their earthenware vessels. The table also indicates which of these Indians paint their vessels and which of them employ fingerprint ornamentation.

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[1]) Tolypeutes conurus.

[2]) The shaded area as well as the numbers on the map show the distribution of the handle in S. America.

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6
Ashluslay SK5

A
c
323

	Number on the map.	possess earthenware vessels	finger-print ornamentation.	painted vessels	handles on vessels.
Ashluslay	(2)	+	—	+[1])	+
Atsahuaca		+	—	—	—
Aymara	(19)	+	—	+	+
Cavina	(58)	+	—	+	—
Chacobo		+			
Cháma					—
Chané	(5)	+	+	+	+
Chimane		+			—
Chriguano	(4)	+	+	+	+
Choroti	(1)	+	—	—	+
Guarayú (Mission)		+	—	—	—
Guarayú (Pauserna)		+	—		—
Huanyam		+	—		—
Huari		+	—	—	—
Mataco	(6)	+	+	+[1])	+
Quichua	(18)	+	—	+	+
Siriono		+	—	—	—
Tambopata-Guarayo		—	—	—	—
Tapiete	(3)	+	—	+[1])	+
Toba	(7)	+	—	+[1])	+
Tsirakua		+	—	—	—
Yamiaca		+	—	—	—
Yuracáre	(22)	+	—	+	—

Handles on earthen vessels are found everywhere in N. Argentina in the district of the Diaguita[2]), in the (H) province of Buenos-Aires[3]), in San Juan[4]) and La Rioja[5]), in the (t)

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[1]) painted only after burning.

[2]) AMBROSETTI, BOMAN, LAFONE QUEVEDO, OUTES and other works.

[3]) AMEGHINO, Vol. I, p. 203, Pl. 7.

[4]) DEBENEDETTI, (4), p 66, 102, 103 etc.

[5]) DEBENEDETTI (5) Fig. 6 and 7.

000 Valle del Rio Chubut[1]), in the (O) Rio Parana[2]), in the (N) upper Rio Parana[3]), in all the old Inca country[4]), also in Ecuador[5]), in S. Chili[6]), in Cundinamarca[7]), and Cauca[8]), and at Sta. Marta in Columbia[9]), on (P) Aruba island[10]) on the (S) island of Trinidad[11]) and at (R) Lago Tacarigua[12]).

Besides the above mentioned tribes we find, among present-day Indians earthen vessels provided with handles among the tribes of (48) N. W. Brazil[13]), the (54) Guahibo[14]), the Kögga-ba[15]) Motilones[16]) Goajiro[17]), the Arawaks[18]) on the coast of Guiana, the Araucanians[19]) and the (8) Lengua[20]).

In addition there are some tribes who have quite lost their primary civilization, e. g. the Mojo. The pottery in the archeological excavations at Mojos is, as already mentioned, without handles.

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531 When ornamenting their earthen vessels the Choroti and Ashluslay never paint them before burning, but the latter sometimes do so afterwards. On some vessels there is plain

[1]) Outes y Bruch (5), fig. 115.
[2]) Torres (2), p. 88.
[3]) Mayntzhusen, p. 466. (rare).
[4]) Uhle, Seler, Reiss u. Stübel and other works.
[5]) Uhle, do.
[6]) Photo. G. M.
[7]) Uhle (I), Pl.
[8]) Uhle (I), Pl.
[9]) G. M. Bolinder's collection.
[10]) Josselin de Jong, Pl. 21, 13, 14 15, etc.
[11]) De Booy, Plate 5 a.
[12]) Marcano, p. 55. Pl. 12, Fig. 39. p. 57, Pl. 15. (Handle small and rare).
[13]) Koch-Grünberg (2), Vol. 2, p. 224.
[14]) Stradelli, p. 31.
[15]) Bolinder (4), p. 136.
[16]) Bolinder (2), p. 39.
[17]) Candelier, p. 267.
[18]) Ten Kate, p. 107 « Waar men aan kruiken, kommen enz. hengsels of ooren vindt, moet men aan Europeesch namaaksel denken. »
[19]) Latcham (1), p. 340.
[20]) Grubb, Pl. p. 74.

[text continues on p. 217]

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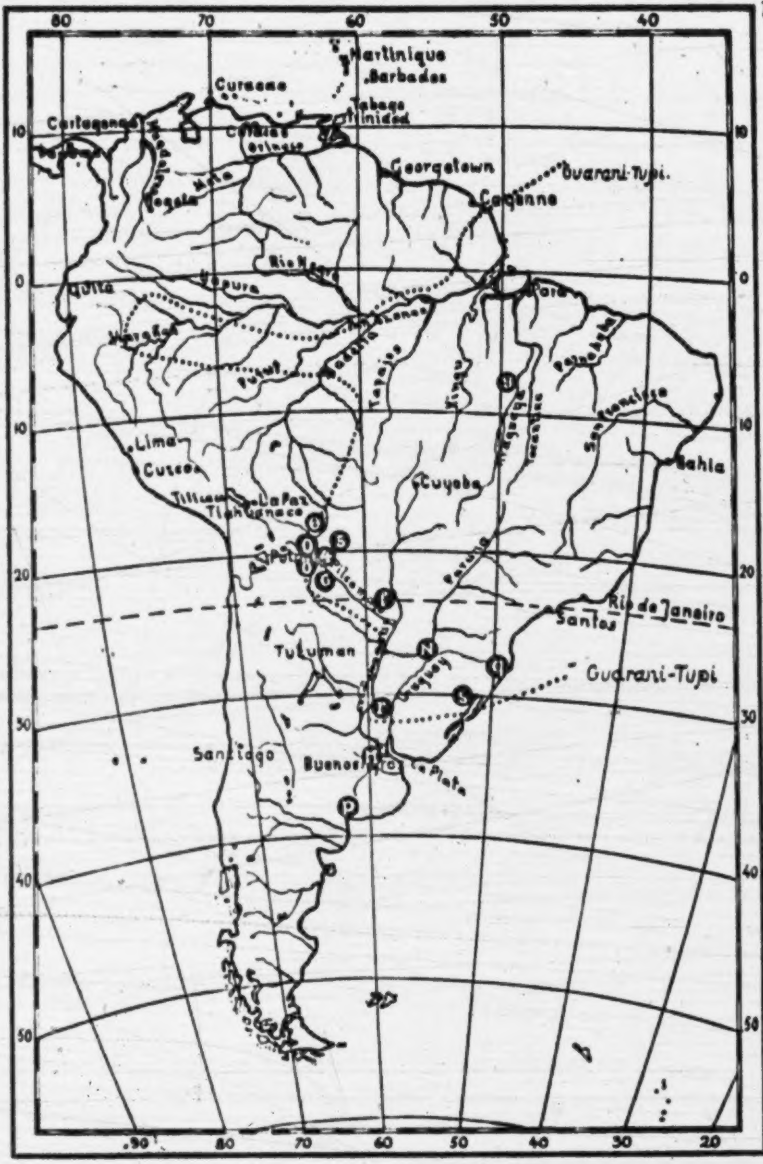
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Guarani-Tupi.
Cayenne
Rio Negro
Quito
Yapura
Para
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Marañon
Purus
Madeira
Tapajos
Xingu
Araguaya
Tocantins
Parnahyba
San Francisco
Lima
Cuzco
Cuyaba
Bahia
Titicaca
La Paz
Tiahuanaco
Potosi
Pilcomayo
Parana
Rio de Janeiro
Santos
Tucuman
Uruguay
Guarani-Tupi
Santiago
Buenos Aires
La Plata
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0
20
30
40
50
90
20

Map 40. The Distribution of Finger-print Ornamentation on Earthenware Vessels.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti
Mataco SI7

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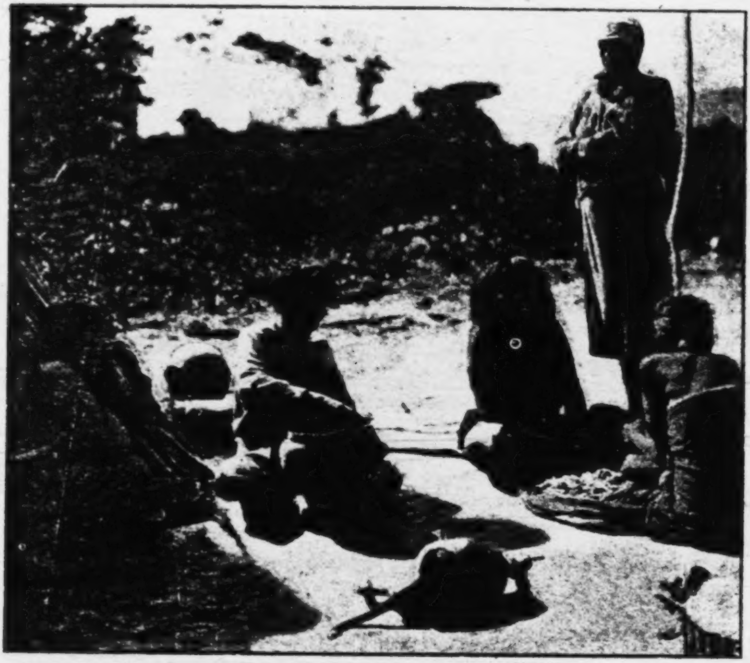

Fig. 66. A. Mataco-Vejos woman impressing a finger-print ornament on the rim of an earthenware vessel.

ornamention executed by means of the wooden tools used for A
polishing. Among the Choroti and Ashluslay I have seen no C
clear finger-print ornamentation. On the other hand this 323
is not uncommon among the Mataco-Vejos, the Mataco who 531
dwell in immediate contact with the Chané, who often embellish their pottery with such ornaments.

On the Choroti vessels and still more frequently on those of the Mataco the clay-coils themselves are sometimes retained as ornaments.

The distribution of finger-print ornamention (Map 40 600 Fig. 66) differs altogether from that of the handle. While the handle is an element of civilization which evidently came to the Chaco from the mountain civilization, finger-print ornamentation came from the east, probably from the Guarani Indians.

I have indicated in the table the tribes among whom I have seen this kind of ornamentation. In my archaeological excavations I have found[1]) such ornamentation at (ö) Tarupayu near the upper Rio Pilcomayo, at (o) Incahuasi between the Rio Parapiti and the Rio Grande in S. Bolivia, and in the province of (e) Sara not far from Sta. Cruz de la Sierra.

AMEGHINO[2]) mentions this ornamentation from the province of (H) Buenos-Aires, OUTES[3]) from (p) San Blas, not far from Bahia Blanca in Argentina.

MEYER[4]) from (q) Laguna in Sta. Catharina in S. Brazil, TORRES[5]) from (r) Entre Rios, KUNERT[6]) from (S) Rio Grande do Sul (Region de Cahy and Forromecco), and GRUBB[7]) from (f) the country of the Lengua Indians.

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[1]) NORDENSKIÖLD (10), Figs 19—22.

[2]) Vol. I Pages 280—291, Pl. 6.

[3]) (4), p. 267, fig. 35.

[4]) P. 340.

[5]) (I), fig. 3.

[6]) P. 33.

[7]) GRUBB, p. 73. »Broken pieces of old pottery have been found bearing scorings, as if made by the pressure of the thumb, and are said to be the work of spirits.«

000 Ornamentation of this kind is found, too, on earthen vessels from (N) Alto Parana1), the vicinity of Bompland, Missiones in N. Argentina2). **KISSENBERTH's**3) discovery of this form of ornamentation on potsherds which he found near the Dominican mission (g) of Conceiçao do Araguaya is extremely interesting. They are probably relics of the migration of the Tapirapé Indians. These Indians are Guarani and were possibly driven from the coast to their present district owing to the slave raids of the Portuguese.

Occasionally pottery is found in other parts of S. America sporadically with fingerprint ornamentation on the rim of the vessel. Typical finger-print ornamentation, however, is only found in the parts indicated on the map.

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The Ashluslay do not paint their pottery before but after burning. This may be due to their not having in their country the colouring materials requisite for painting before burning. I have not got painted pottery from the Choroti.

For colouring, the (2) Ashluslay use the resin of a tree, «palo santo».4) Besides these Indians and other nearly re-
000 lated Chaco tribes, the (7) Toba, (3) Tapiete, (8) Lengua5), (12) Mbayá6) and (11) Chamacoco7), I have only seen the (5) Chané use similar resin for the painting of their pottery, which painting, however, is done before burning. The latter sometimes resin the rim of a vessel after the burning, while it is still warm. There are very considerable areas of S. America where the art of painting pottery has not been understood, and is not understood to-day. In the first place the art was known to the tribes on the Andes (the shaded area on the map) as well as the Guarani tribes and the major-

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1) **KUNIKE**, p. 158, fig. 96.
2) G. M. **BACKMAN's** collection.
3) (2), p. 77, fig. 20.
4) Bulnesia Sarmienti.
5) **GRUBB**, p. 73.
6) **COLINI**, p. 313.
7) **K. v. D STEINEN** (4), p. 325.

ity of the Arawaks. Thus, the Chacobo, Huanyam, Huari and Guarayú (Pauserna) have no painted earthenware.

I have sought to indicate on the map 41[1]) the places where painted earthenware has been found, or is still in use. The latter is the case among the (54) Guahibo[2]) in Venezuela, many Indian tribes (48) in N. W. Brazil[3]), the (X 6) Catuauixi[4]) and Jamináua[5]) on the Rio Purús, the (61) Menimehe on the Rio Yapurá[6]), (34) Jivaro[7]) (3 D) Cocama[8]) (46) Conibo[9]) (33). Campa[10]), (60) Apiacá[11]) on the Rio Tapajos, (59) Chrichaná[12]), the (55) Indians in the coast-lands of Guiana[13]), the Araucanians[14]), (17) the Abipone[15]) the (X 4) Payaguá[16]), and the (28) Indian tribes on the Rio Xingú[17]).

Staden mentions painted pottery from the (38) Cario (Tupinambá), Gaspar de Carvajal from (X 7) the Indians on different parts of the Amazon.

In my archaeological excavations I have found pottery painted before burning at (M) mounds in Mojos in N. E. Bolivia, in the valley of San Francisco, and everywhere in the mountain districts, i. e. in the valleys of the Andes, where alone I have done any digging.

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[1]) The shaded area and the numbers show the distribution of painted pottery in S. America.

[2]) Stradelli, fig. 16.

[3]) Koch-Grünberg (2), Vol. 2, p. 224.

[4]) Chandless, p. 95.

[5]) Stegelmann, p. 137.

[6]) Whiffen, p. 95.

[7]) Rivet (1), p. 42 (588).

[8]) Ratzel, Pl. p. 477.

[9]) S:t Cricq. p. 278.

[10]) Grandidier, p. 141.

[11]) Koch-Grünberg (6), p. 359.

[12]) Barbosa Rodrigues, p. 151.

[13]) Im Thurn, p. 277.

[14]) Latcham (1), p. 340.

[15]) Dobrizhoffer, Vol. 2, p. 131.

[16]) Azara, (I), Vol. 2, p. 120.

[17]) K. v. d. Steinen (3), p. 276.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti SK6

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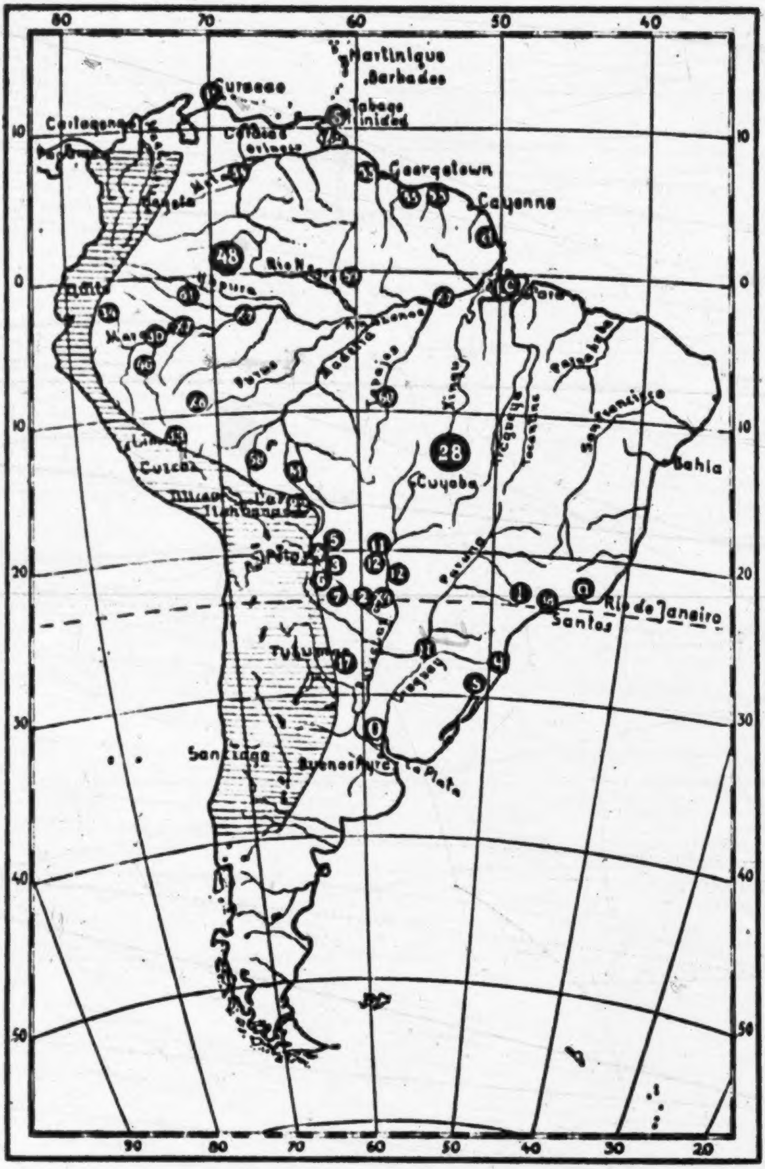
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Tapajos
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Cuyaba
Bahia
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Rio de Janeiro
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Map 41. The Distribution of Painted Earthenware.

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Pottery painted before burning has been found in the greater part of the high ground of Columbia, in the whole area of the old Incan empire, in the whole of northern and central Argentina, on the (O) lower Rio Parana[1]), on the (N) Alto Parana[2]), in (l) São Paulo[3]), at (q) Laguna in S. Brazil[4]), in (s) Rio Grande do Sul[5]), in the neighbourhood of (a) Rio de Janeiro[6]), on (c) Marajó Island[7]), in (d) Counany in Brazilian Guiana[8]), on the (S) Island of Trinidad[9]), and on the (p) islands of Aruba and Curaçao[10]).

To distinguish the source of the extremely simple ornamentation sometimes painted on the earthenware of the Choroti and Ashluslay Indians is, I think, now impossible. For my part I deem it probable that it is a clumsy imitation of that which they have seen more advanced tribes, perhaps the Chané and Chiriguano, paint on their earthenware.

Wood-carving.

As regards the making of wooden articles by the Choroti and Ashluslay, I have no further information of anthropo-geographical interest to give beyond what was said above.

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Articles made from bones and snail and mussel shells.

The Choroti and Ashluslay have a whole series of articles made of bones and snail and mussel shells. Respecting their manufacture, I have nothing of anthropo-geographical interest to say.

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[1]) TORRES (2), p. 92, p. 108.

[2]) MAYNTZHUSEN, p. 406; KUNIKE, p. 159.

[3]) V. IHERING (3), Pl. 23, fig. 31.

[4]) H. MEYER, (2), p. 340.

[5]) Region de Cahy and Forromecco, KUNERT, p. 33. According to Kunert these are post-Columbian.

[6]) NETTO, p. 412.

[7]) NETTO, Pl. I, etc.

[8]) GOELDI, numerous illustrations.

[9]) DE BOOY, Pl. 8, etc.

[10]) JOSSELIN DE JONG, numerous illustrations.

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The Choroti and Ashluslay understand how to bore through teeth and mussel-shells. For this purpose they now use drills, made of darning-needles provided with a handle, which they obtain from the whites. The art of drilling holes in bone must be very ancient in S. America, being certainly known to every Indian tribe. The Tierra del Fuegians, however, seem not to possess necklaces of drilled teeth.

The carving and ornamentation of calabashes.

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Calabashes are extensively used in the whole of tropical S. America. They are lacking only in the extreme south of the continent and among some Gês-tribes who are quite uncivilized. Even up on the Andes the Indians often have calabashes which they get from the valleys on the eastern slopes of these mountains. Calabashes have been found in old excavations in the Puna de Jujuy[1]) where they cannot be cultivated. During his archaeological excavations at Calama in Puna de Atacama UHLE[2]) found numerous calabashes. He believes that the Indians there received them from Argentina.

The Choroti and Ashluslay have no tree calabashes, but use the fruit of a cucurbitaceæ which they cultivate. From these they make boxes, large bowls, etc.

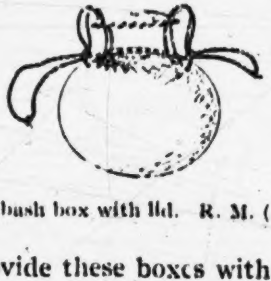

Fig. 67. Calabash box with lid. R. M. (A. 1304). 1/4.

They often provide these boxes with lids which are not infrequently carved in the shape of a star. They are made in the manner described by SÁNCHEZ LABRADOR[3]), speaking of

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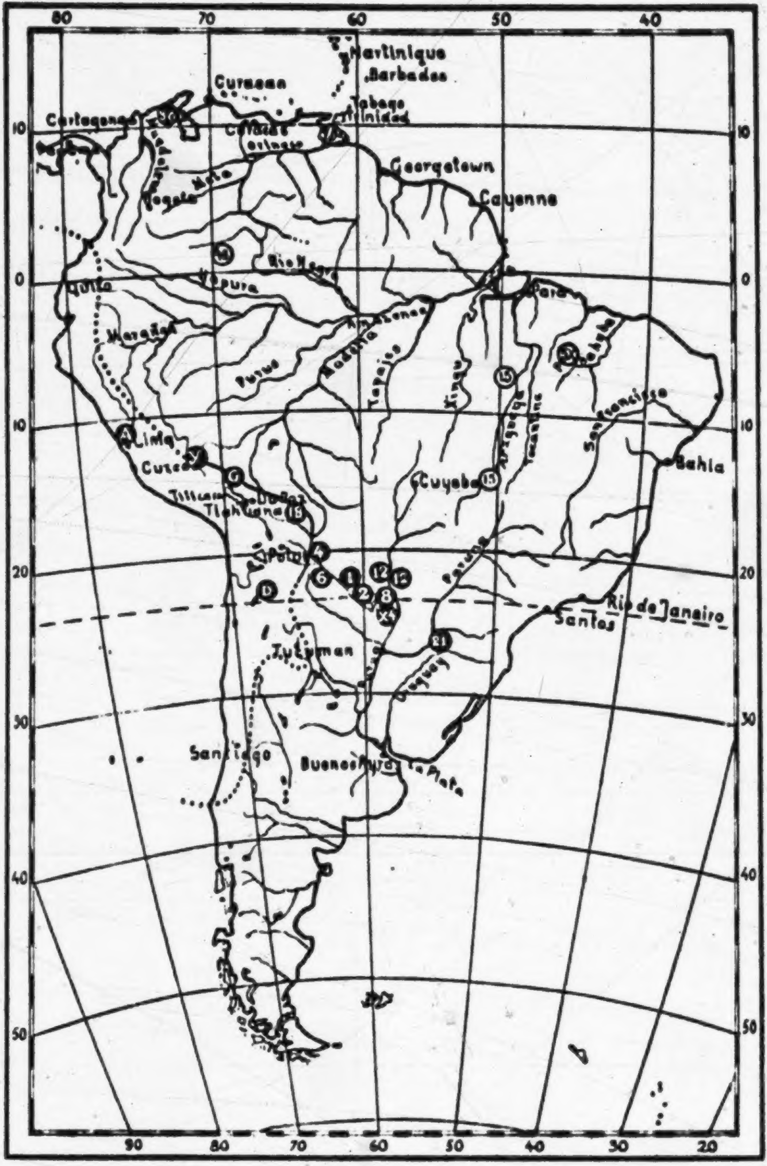
[1]) LEHMAN-NITSCHE (1).

[2]) (5), p. 109.

[3]) Vol. I, p. 271.

[text continues on p. 224]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San Francisco
Lima
Cuzco
Titicaca
Tiahuanaco
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Map 42. The Distribution of Calabashes with Lids

A c 415 322 the Mbayá:— «Labran una especie de calabazos grandes sacandoles con delicadeza un pedazo por el pezon que despues ajusta como tapa», — e. g. *the lid and the calabash-box are always from one and the same fruit.*

A c [531] The calabashes are frequently ornamented, sometimes by burning, sometimes by cutting. Should a large calabash crack, the Choroti and Ashluslay generally mend it by sewing together the edges. (See Fig. 68).

Calabashes with lids of this kind (Fig. 67) are found among the (18) Quichua[1]), (4) Chiriguano[2]), (6) Matacos[3]).

000 (X 4) Payaguá[4]), (12) Mbayá[5]), Kadiuéo), (8) Lengua[6]), (8) Angaité[7]), (21) Cainguá[8]), and (36) Ijca[9]) as well as the (2) Ashluslay and (1) Choroti.

Furthermore, calabashes with similar lids (Map 42) are mentioned from excavations in (D) ? the Puna de Jujuy[10]), from (A) the coast of Peru[11]), from (y) the neighbourhood of Cuzco[12]), and from (G) Capamitas in the borderland of Peru and Bolivia[13]). We see that the distribution in S. America of lids of the kind here described is in the west Plainly we have to do with a cultural element which the Chaco Indians have derived from the western area of civilization

Calabashes with lids of a rather different type are mentioned by Krause from the (15) Kayapó[14]), by Kissenberth[15])

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[1]) G. M. 15. 1. 87.

[2]) G. M. 15. 1. 144.

[3]) R. M. (M. 1251).

[4]) M. C. (He. 316, H. 322 a. H. 923.)

[5]) Boggiani (2), Fig. 50.

[6]) Grubb, p. 74.

[7]) M. f. V. C. (17634, Collection Frič.)

[8]) M. f. V. C. (613 i).

[9]) G. M. Bolinder.

[10]) Lehmann-Nitsche (1), Pl. 3, Fig. 40.

[11]) Reiss und Stübel, Vol. 3, P. 82, fig. 4.

[12]) M. f. V. B. (V. A. 8900).

[13]) Nordenskiöld, (3), S. 24. R. M. (06. I. 408.)

[14]) Fig. 215.

[15]) (1), fig. 1.

2: Nordenskiöld E-5 (1908-1909) 1919

SK6 Choroti SK6

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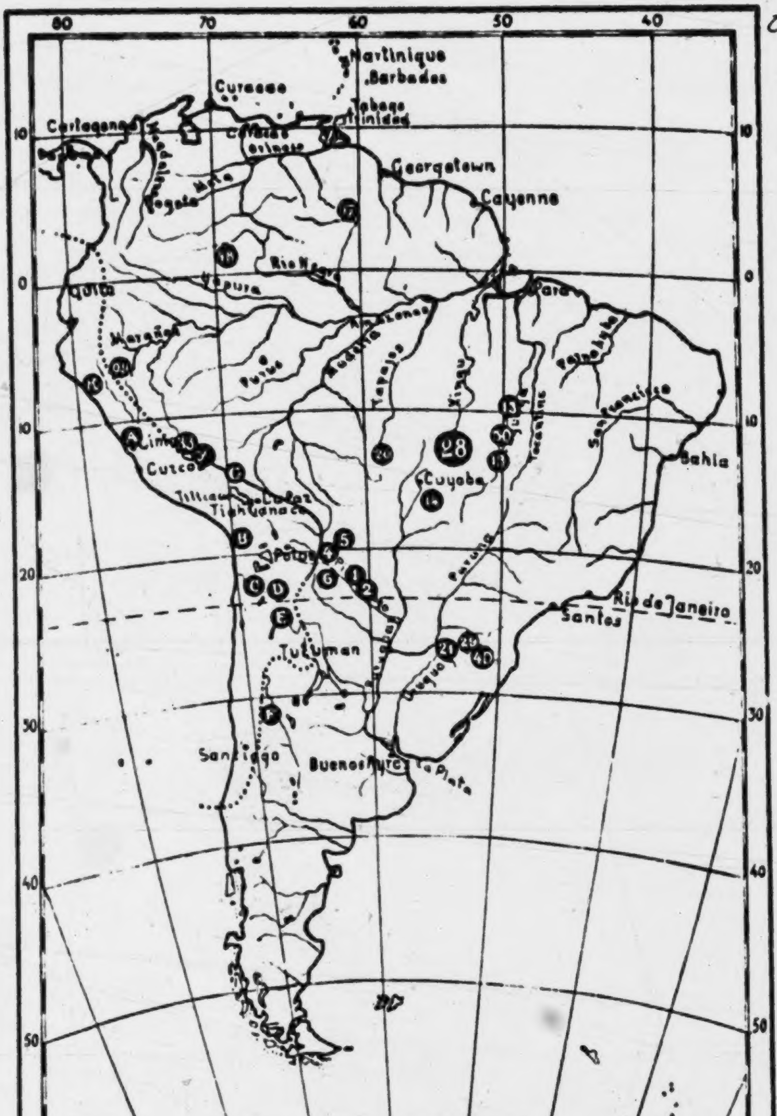

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Map 43. The Distribution of Calabashes with Pyrograving.

000 from the (5X) Canella, and KOCH-GRÜNBERG[13]) from the (48) Yahúna, Rio Apaporis.

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Calabashes with encaustic ornamentation (Map 43) are rare among the Ashluslay, somewhat more common among the Choroti, and very common among the Mataco. They are found among the Toba and, very generally, among the Chiriguano and Chané. They are quite wanting in the tribes I visited in N.E Bolivia and the adjacent country, although some of these tribes, e. g. the Guarayú (Pauserna) have got richly ornamented calabashes.

Calabashes with encaustic ornamentation are also known from the (14) Bororó[2]), (20) Paressi-Kabiši[3]), (28) Bakaïrí[4]) and other tribes on the upper Rio Xingú, (13) Karajá and (50) Šavajé[5]) (21) Cainguá[6]), (29) Caingáng[7]), (41) Šokleng[8]), the Indians of (09) Chachapoya[9]), Peru, (47) Arecuna[10]), (47) Makusi and Wapischana[11]), the Indians on the Rio Pichis, Rio Ucayali[12]) (33) Campa[13]), (48) Tarianá[14]), and (48) Arapaso[15]) (on the Cairaý Uaupés).

In Peru, Argentina and Chile calabashes graven by fire have been frequently discovered, e. g. at (B) Arica[16]), (A)

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[1]) (2). Vol. 2, fig. 107.
[2]) M. f. V. C. (17069). FRIČ Collection.
[3]) MAX SCHMIDT (1), p. 223.
[4]) MAX SCHMIDT (3), fig. 227-230.
[5]) KRAUSE, p. 280; M. f. V. L.
[6]) M. C. (He. 054).
[7]) M. C. (He. 042).
[8]) M. f. V. B. (V. B. 4472).
[9]) UHLE (1), Vol. 2, Pl. 4, fig. 11.
[10]) M. f. V. B. (V. A. 61234).
[11]) M. f. V. H. (11, 17:57-58; 11, 17:20).
[12]) M. f. V. B. (V. A. 10882). **(not marked on the map).**
[13]) M. f. V. B. (V. A. 10883).
[14]) M. f. V. B. (V. B. 6500).
[15]) M. f. V. B. (V. B. 5935).
[16]) UHLE (1), Vol. 1. Pl. 25, fig. 19.

Ancon [1]), (K) Trujillo [2]), (y) Cuzco (Paucartambo [3]), (G) Quiaca [4]), (C) Calama [5]), (E) La Paya [6]) and in (F) San Juan [7]). 000

In some parts the Indians may have learnt the encaustic ornamentation of calabashes from whites and negroes. It is evident, however, that this kind of ornamentation *mainly occurs in the west of S. America*, and I deem it in the highest degree probable that the Chaco Indians took over the art of pyrograving from the western area of culture.

The question arises whether this process of ornamentation did not originate in a district where the people had at their disposal metal implements by means of which figures might easily be burnt into wood or similar material.

Among the Choroti and Ashluslay in the Chaco pyrograving is performed on whistles and cases, as well as on reed flutes. A c 531 415

Calabashes with engraved ornamentation are distributed over a very wide area. I will only mention here the tribes among whom I have myself seen them:— viz. the Choroti, Ashluslay, Mataco, Toba, Tapiete, Tsirakua, Chiriguano, Chané, Churápa, and Yuracáre.

The calabashes of the Choroti and Ashluslay Indians are never painted, nor are they blackened inside, like the calabashes of the Guarayú and many other tribes.

As regards the ornamentation itself, I do not venture to assign any particular quarter as its source. It may possibly be an imitation of the ornaments on the calabashes of more civilized tribes. I am not able, however, to adduce any proof of this. 000

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[1]) Reiss und Stübel, Vol. 3, Pl. 82.
[2]) M. C. (O. D. I. c. 249).
[3]) M. f. V. B. (V. A. 8900)
[4]) Nordenskiöld (3), p. 29, R. M. (06. 1. 434).
[5]) Uhle (5), p. 109.
[6]) Ambrosetti (6), p. 523.
[7]) Debenedetti (4), p. 64, fig. 35.

A C [415] 006

When a small crack appears on a large and valuable calabash, the (1) Choroti and (2) Ashluslay, as was mentioned, mend it by sewing the edges together. Calabashes sewn together in like manner (Map 44) are also found among the (6) Mataco, (4) Chiriguano, (22) Yuracáre[1]) and the (28) Indians on the Rio Xingú[2]). On the other hand, I have never seen mended calabashes among any of the tribes I visited in N. E. Bolivia.

The National Museum at Stockholm possesses a calabash from the excavation field at (A) Ancon[3]) on the Peruvian coast which has been mended by sewing together the sundered edges. There is another in the Gothenburg Museum from the (36) Ijca in Columbia[4]). Probably the sewing together of calabashes is an idea obtained by the Chaco Indians from the mountain civilization. In the Chaco it is the large calabashes, hard to replace, which are thus mended. Of the mended calabashes I collected from the Chiriguano there are, characteristically enough, tree calabashes which do not grow in their country, but are imported from the Sta Cruz district. The idea of mending calabashes must certainly have arisen in a tract where calabashes either were not cultivated at all or, if cultivated, only with difficulty.

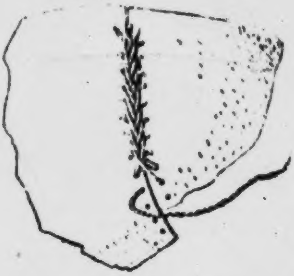

Fig. 68. Piece of a calabash mended by sewing. Mataco. R. M. (M. 170). $^1/_1$.

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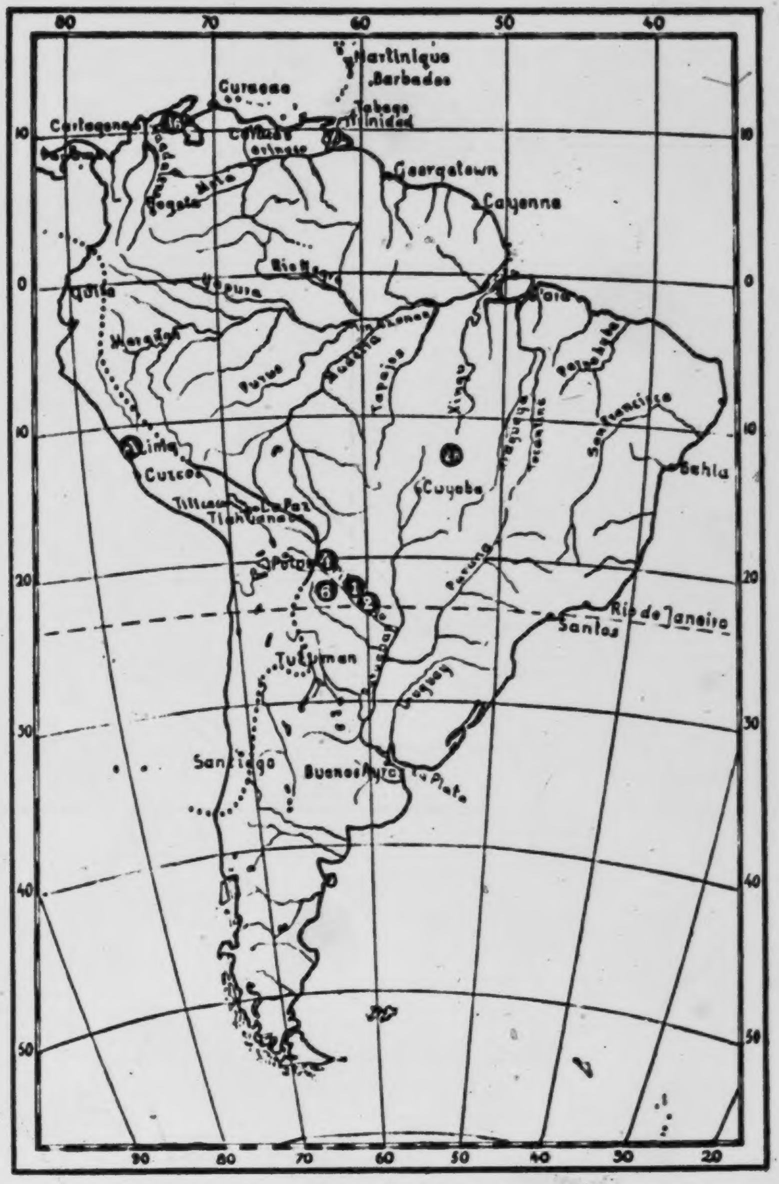
[1]) Not marked on the map.

[2]) K. v. d. Steinen (3), p. 241.

[3]) STOLPE's collection. (R. M. 21, 150).

[4]) G. M. BOLINDER's collection.

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6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Map. 44. The Distribution of Calabashes mended by sewing.

Ashluslay SK5

000 being thus rare objects, as e. g., on the table-lands of the Andes. One calabash which the Mataco-Vejos[1]) have mended was obtained by them originally from the Chané. It is beautifully ornamented and thus, probably, appeared to them more valuable than their own calabashes. It was therefore considered to be worth the trouble of mending.

Feather-work.

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There is one small work[2]) on different kinds of feather-technique in S. America. It is not, however, full enough to give information as to the distribution of different forms of this technique. Nor am I in possession of sufficient data of comparison to be able to draw a map showing the distribution of the different methods of binding feathers.

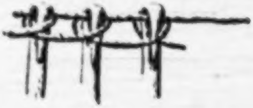

Fig. 69. Illustration showing how the feathers are bound in a footband.

From fig. 69 we see how feathers are bound by the Ashluslay and Choroti into footbands (ankle-ornaments), girdles and the like. It is usual, also, to bind ostrich feathers quite simply around a string. The footbands are partly made in this wise.

In the Chaco it is not uncommon to sew feathers on to cloth. Among the Indians I have visited elsewhere in S. America, I am not aware of this custom. In ancient Peru feathers were often sewn on to mantles, etc.

A peculiar custom among the Indians of the Chaco — the Choroti and others — is that of cutting notches out of the feathers in their brow-bands exactly like some of the North American Indians. In S. America I only know the custom from other Chaco tribes and from Guiana[1]). As regards the Chaco this custom is mentioned by SÁNCHEZ LABRADOR from the Mbayá[2]).

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[1]) R. M. (M. 1048).

[2]) Mead (2).

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301

Leather-making.

The Choroti and Ashluslay do not understand the art of tanning. They show skill, however, in making leather soft by scraping. I did not observe any point of anthropogeographical interest in their method of preparing leather.

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[1]) GOEJE (1), Pl. 3. 1. 2. Ojana.

[2]) Vol. 1, p. 214.

2: Nordenskiöld E-5 (1908-1909)1919
SK6 Choroti SK6
Ashluslay SK5

XXVIII.

The Influence of the Whites on the Material Culture of the Ashluslay and Choroti.

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In the foregoing I have given an account of the material culture of the Choroti and Ashluslay Indians, and of the geographical distribution over the rest of S. America of elements of civilization characteristic of these tribes. In what follows I intend, in continuation of the above exposition, to bring together in tabular form such culture-elements as plainly have a common origin, beginning with those which the Indians of the Chaco have received from the whites. Such things as tools, clothes, etc., acquired by the Indians from the whites are not included, but only those of which they got the idea from white men. In addition, there are domestic animals and some cultivated plants which have come to them from the same quarter. We will, then, first try to skim off the most recent layer, as it were, of the civilization of the Choroti and Ashluslay Indians.

The positive influence of white culture is, generally speaking, greater in those parts where the Indians live far away from the whites, than in in those where they live in direct dependence under the white man. Thus, the Ashluslay, who have preserved their independence, carry on ranching on a large scale, while some Mataco tribes, almost entirely dependent, have no cattle at all. Up to quite recent times the Ashluslay were[1]) in the happy position of being

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[1]) At least they were so as late as A. D. 1908–1909.

Ashluslay SK5

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177

able to derive advantages from the whites without falling into irretrievable poverty.

Domestic animals and things connected with them are of course the most important contributions received by the Choroti and Ashluslay from the whites.

Otherwise, the cultural life and the handicrafts of the Choroti and Ashluslay Indians have been little influenced by the whites, i. e., when one thinks solely of positive and not of negative influence.

Table I.

Elements of culture received by the Choroti and Ashluslay from the whites +:

1)	Dwellings	--
2)	Beds	--
3)	Cultivated plants and agricultural tools.	
	Water melons	+
4)	Implements used in harvesting wild plants	–
5)	Hunting weapons and implements.	
	Pellet bow. (Fig. 8. Map 5)	+ ?
6)	Weapons never or seldom used for hunting	
7)	Fishing tackle	–
8)	Domestic animals and articles connected with them	
	Horse	+
	Cattle	+
	Goat	+
	Sheep	+
	Poultry	+
	Cats	+
	Spurs	+
	Saddle	+
9)	Tools	
	Tools made of pieces of old iron (Indian work)	+
	Handles of iron tools. (Indian work)	+
10)	Implements for making fire.	
	Tinder-box for flint and steel	+

2: Nordenskiöld E-5 (1908-1909)1919

SK6 Choroti SK6

Ashluslay SK5

A
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177

11)	Hearth and its accessories	—
12)	Utensils used in the preparation and consumption of food	
a)	in preparing meal	—
b)	Cooking pot	—
c)	Spit	—
d)	Vessels holding food to be eaten	—
e)	Implements with which to eat. Horn spoon	+
13)	Means of indulgence and articles in connection	—
14)	Clothes	---
15)	Articles connected with the deforming of the body	—
16)	Tattooing instruments	—
17)	Ornaments for the body, etc	—
18)	Toilet articles	—
19)	Implements for carrying burdens	---
20)	Articles for keeping things in	—
21)	Games and playthings	--
22)	Signalling and musical instruments etc	
	Musical bows	+
	Trumpets of cowhorn	+
23)	Trophies	—
24)	Property marks	
25)	Various handicrafts	?
a)	Rope and string manufacture and spinning	—
b)	Sewing or the use of an eyed needle	—
c)	Knitting and plaiting	
d)	Twisting of ropes and string	—
e)	Weaving	—
f)	Pottery	—
g)	Wood carving	—
h)	Bone and shell bead work	--
i)	Carving and ornamentation of calabashes	—
j)	Feather work	—
k)	Leather work	---

XXIX.

The Influence of the Mountain Civilization in the Gran Chaco.

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C
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Having given some account of the cultural influence of the whites in the Chaco, I will now bring forward the culture-elements which the Choroti and Ashluslay, as was explained above, seem to have received from the mountain civilization, i. e., the Bronze Age civilization of western S. America. The western influence did not bring about any revolution in the civilization of the Chaco tribes, but it brought them a very considerable addition.

Table 2.

Elements of culture received by the Choroti and the Ashluslay from the mountain civilization. +

1)	Dwellings	—
2)	Beds	—
3)	Cultivated plants and agricultural tools	
	Spades (Map 1)	+
4)	Implements used for harvesting wild plants	—
5)	Hunting weapons and inplements.	+ ?
6)	Weapons seldom or never used for hunting.	
	Knuckledusters (Map 6)	+
	Clubs with outstanding head	+
7)	Fishing tackle	—
8)	Domestic animals and articles in connection with them	—

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9) **Tools.**
Wooden knives (in the form found among the Choroti and Ashluslay) .... +
Toothed scrapers of wood .... +
10) Tools for making fire .... —
11) Hearths and their accessories.
Feather fire-fan. (Map 9) .... +
12) Utensils used in the preparation and consumption of food.
  a) In the preparation of meal .... —
  b) Cooking pots .... —
  c) Spits .... —
  d) Vessels holding food to be eaten: wooden bowls. (Map 12) .... +
  e) Implements with which to eat: wooden spoons. (Map 13) .... +
13) Means of indulgence and articles thereto appertaining —
14) Clothes
  Poncho .... +
  Shirt. (Map 16) .... +
  Woven girdle .... +
  Sandals. (Map 17) .... +
15) Articles connected with the deforming of the body —
16) Articles connected with tattooing .... —
17) Ornaments for the body ....
  Threadcross (Map. 22) .... ?
  Shell-beads ....
  The custom of making spangles of shell-beads (Map. 20) .... +
  Tassels on bands and clothes .... +
  Browbands (woven). (Map 21) .... +
  Netted hoods. (Chaco type) .... +
18) Toilet articles.
  Stick combs (in the form found among the Choroti and Ashluslay) +
  Wooden combs .... +

2: Nordenskiöld E-5 (1908-1909) 1919
SK6 Choroti SK6
Ashluslay SK5

?

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19) Implements for carrying burdens: Earthen vessels carried by a string. (Fig. 4) + c

20) Articles used for keeping things in — 177

21) Games and playthings
  Games of chance in general (Map 27) +
  Tsúka game +

22) Signalling and musical instruments etc.
  Skin drum and drumstick (Map 30) +
  Long wooden whistle (Fig. 53) (Map 32) +
  Round wooden whistle (Map 33) ?

23) Trophies. —

24) Family marks. (Map 34) ?

25) Various handicrafts.
  a) Rope and string making and spinning.
    Bakaïrí spindle. (Map 35) +
  b) Sewing or the use of the eyed needle. (Map 36) +?
  c) Knitting and plaiting.
    Technique 5 (Map 37) +
  d) Rope and string making.
    Fine rope twisting +
  e) Weaving.
    Ornamented borders on fabrics +
    Kelim technique. (Map 38) +
  f) Pottery
    Painting of earthen vessels —
    Handles on ditto (Map 39) +
    Waterpots +
  g) Wood carving —
  h) Bone and shell-bead work —
  i) Carving and ornamentation of calabashes
    Calabashes with lids. (Map 42) +
    Encaustic ornamentation[a] of calabashes (Map 43) +
    Sewing of cracked calabashes. (Map 44) +

[a] [i.e. pyrograving. — Analyst]

Ashluslay SK5
Chaco Indians SK4

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c
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j) Feather work .... —
k) Leather work .... —

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From this we see that the influence of the mountain civilization in the Chaco has been very considerable. It is manifest, from the maps and from the facts adduced by me in the following, that nearly all the culture elements derived from the mountain civilization are lacking in most of the tribes of N. E. Bolivia. In that district, practically, only the Yuracáre possess these elements of culture.

An exception is afforded by the shirt, the distribution of which, however, has most certainly been considerably extended by missionaries in post-Columbian times.

The Chiriguano and the Chané possess sundry of the culture-elements common to the Choroti, Ashluslay and the mountain civilization. The Chané have certainly dwelt long in the tract they now occupy, while the Chiriguano, as mentioned above, as late as the opening of the 16 th century, emigrated from the district around the Rio Paraná to the foot of the Andes. Thanks to the interchange of ideas and customs which has since taken place, the Chané and the Chiriguano have now a very similar cultural standpoint. We may presume that it is through the mediation of the Chané that the Chiriguano received certain culture-elements from the mountain civilization[1]).

The following table may serve to illustrate the above.

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[1]) The Chiriguano may surely be reckoned among the tribes whose cultural level has been raised by the kidnapping of women. When they conquered the territory now inhabited by them, they seized the women of tribes possessing a higher form of civilization. Undoubtedy, they kidnapped large numbers of Chané women. Significantly enough it is pottery and weaving, i.e. chiefly female handicrafts, which have attained the highest pitch of development. The Guarayú, who emigrated at the same time as the Chiriguano to the tract they now inhabit, had not the same opportunities of raising their cultural level by the kidnapping of women, whence it happens that the material culture of the Chiriguano is considerably higher than that of the Guarayú.

2: Nordenskiöld E-5 (1908-1909) 1919

SK6 Choroti :

Chaco Indians SK4

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Culture elements received by the Choroti and Ashluslay from the mountain civilization.	Yuracáre.	Chimane.	Guarayú (Pauserna).	Chima.	Atsahuaca.	Chacobo.	Huanyam.	Huari.	Chiriguano.	Chané.
Spades	—	—	—	—	—	—	—	—	+	+
Knuckle-dusters	—	—	—	—	—	—	—	—	—	—
Club with outstanding head	—	—	—	—	—	—	—	—	—	—
Wooden knives	—	—	—	—	—	—	—	—	—	—
Toothed scrapers of wood	—	—	—	—	—	—	—	—	—	—
Feather fire fan	+	—	—	—	+	—	—	—	—	—
Wooden bowls	+	—	—	—	—	—	—	—	+	+
Wooden spoons	+	—	—	—	—	—	—	—	+	+
Poncho	—	—	—	—	—	—	—	—	+	+
Shirt	+	+	—	+	+	+	+	—	+	+
Woven girdles	—	—	—	—	—	—	—	—	+	+
Sandals	—	—	—	—	—	—	—	—	+	+
Spangles of shell-beads	—	—	—	—	—	—	—	—	—	—
Woven browband	—	—	—	—	—	—	—	—	+	+
Netted hood (Chaco-type)	—	—	—	—	—	—	—	—	—	—
Wooden comb	—	—	—	—	—	—	—	—	+	—
Earthen vessels borne on a string	—	—	—	—	—	—	—	—	—	—
Tsáka game	—	—	—	—	—	—	—	—	+	+
Skin drum	—	—	—	—	—	—	—	—	+	+
Long wooden whistle	+	—	—	—	—	—	—	—	+	+
Kelim-technique	—	—	—	—	—	—	—	—		—
Eyed needle	—	—	—	—	—	—	—	—	+[1])	—
Technique 5	—	—	—	—	—	—	—	+		—
Handles on earthen vessels	—	—	—	—	—	—	—	—		+
Calabashes with lids	—	—	—	—	—	—	—	—	+	+
Pyrograving	—	—	—	—	—	—	—	—	+	+
Sewing of cracked calabashes	+	—	—	—	—	—	—	—	+	—

Of the 27 culture-elements entered in this table, and which have plainly come to the Choroti and Ashluslay from the mountain civilization, we find 17 among the Chiriguano, 14 among the Chané[2]), 6 among the Yuracáre, 2 among the Atsahuaca and 1 among the other tribes, while the Guarayú, (Pauserna) have not a single one of these culture-elements.

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[1]) Only large needles which the Chiriguano use when fishing (not marked on map 30).

[2]) The fact of there being a smaller number of these culture elements among the Chané than among the Chiriguano is doubtless owing to our imperfect knowledge of their cultural position.

2: Nordenskiöld E-5 (1908-1909)1919

SK6 Choroti

Chaco Indians SK4

177 In the following table we can see the distribution of these culture-elements among some tribes in different parts of S. America whose material civilization is well known.

Culture elements received by the Choroti and Ashluslay from the mountain civilization.	Araukanians.	Bakaïri.	Karajá.	Caingua.	Indians in N. W. Brazil.	Indians of the Koraima country.	Jivaro.	Botokudes.
Spades	+	—	—					—
Knuckle-dusters	—	—	—	—	—	—	—	—
Club with outstanding head	—	—		—	—			—
Wooden knives	—	—	—	—				—
Toothed scrapers of wood	—	—	—	—		—		—
Feather fire fan	—	—	—	—			+	—
Wooden bowls	+	—	—		—	—		—
Wooden spoons	+	—	+	—				—
Poncho	+	—	—					—
Shirt	—	—	—	—	—		—	—
Woven girdles	+	—	—	+	—			—
Sandals	—	—	—	—	—	+	—	—
Netted hoods (Chaco type)	—	—						—
Spangles of shell-beads	+	—	—					—
Woven browband	+	—	—	+		—		—
Wooden comb	—	—	—			—	—	
Earthen vessels borne on a string	—	—	—	—	—	—	—	—
Games of chance in general	+	—	—	—			—	—
Tsúka game	—	—	—		—	—	—	—
Skin drum	+	—	—	+	+	+	—	—
Kelim-technique with open slits	—	—	—	—	—	—	—	—
Long wooden whistle	—	—	—	—	—	—	—	—
Eyed needle	—	—	+	—	+	—	—	—
Handles on earthen vessels	+	—	—	—	+	—	—	—
Lid on calabash	—	—	—	+	+	—	—	—
Pyrograving	—	+	+	+	+	+	—	—
Sewing of cracked calabashes	—	+	—	—	—	—	—	—
Technique 5	—	+ [1])	—	—	—	—	—	—

Most of the culture elements enumerated in this table have spread from the area of civilization in the west only towards the Chaco. Some, like the pot-handle and encaustic ornamentation are somewhat more widespread. Their origin, however, may easily be perceived from the map.

The question now arises whether still more of those culture-elements that are widely distributed over the S. Ameri can continent did not spring from the area of civilization in the west. Such culture-elements as the string-bag and the spindle of Bakaïrí type. They are lacking in N. E. Bolivia, like most of the culture elements which the Chaco Indians evidently received from the western area of civilization, and which are mentioned on page 239. Spindles are found among the tribes of N. E. Bolivia, too, but they are of another type (Bororó) and the way they are used differs from that of the Bakaïrí spindle.

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[1]) Among neighbouring tribes.

As to the Bakaïrí method of spinning, FRÖDIN and I have come to the conclusion that it is younger than the Bororó method. The Bakaïrí method, at least in this part of America, had its origin in the great wool-spinning area of the Andes. Only in Incan times did the process spread thence to the coast of Peru. It may, indeed, have begun to spread eastwards at an earlier date. In N. E. Bolivia, which was shut off from the western area of civilization, an older method of spinning has been preserved[1]).

It is also interesting to note that a very primitive type of manioc-grater is used. Meal was not pounded in mortars, but on a wooden slab, or in a wooden trough with a wooden slab or a stone and, earlier, with an earthenware roller in an earthenware basin. An extremely primitive

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[1]) Especially in view of these facts, I greatly desire the opportunity of making public my collections from the Yuracáre, Chacobo, Huanyam etc. in the same manner as I have dealt with those from the Choroti and Ashluslay. It would be of the greatest interest to me, with the aid of recent material, to explain the influence from northern S. America which asserted itself in N. E. Bolivia and the adjacent country. This influence I have already endeavoured to demonstrate by means of the archaeological material found by me in Mojos. (NORDENSKIÖLD 10). It would else be extremely interesting to determine whether, from the study of the ethnographic material, an older pre-Incan influence from the western area of civilization can be proved in the case of Mojos. Archaeological discoveries made there (MAX SCHMIDT (5) NORDENSKIÖLD (14)) and the occurrence of spindles of the Bororó type in N. E. Bolivia and in the coast lands of Peru (FRÖDIN and NORDENSKIÖLD) would seem to speak for this supposition.

177 blow-pipe is found there made of a hollowed bamboo cane. It is clear that in this part of S. America various ancient culture-elements still exist. Unfortunately, the archaeological material found in Peru has not, in general, been raised and treated in such a manner that we can say with certainty whether the elements of culture that have reached the Chaco from the west are Incan or pre-Incan. One culture-element is certainly Incan, viz, the Waterpot (Fig. 45). The counterpart (Fig. 43) of this, within the western area of civilization, is undoubtedly Incan, as **Uhle** has shown. I deem it probable, however, that most of the culture-elements mentioned in the table on page 239 did not spread to the Chaco until Incan times. This I conclude from the fact of their not being widely distributed in the eastern part of S. America. Still, it is possible that my supposition is a mistaken one.

Respecting some elements of culture, it is not possible to say whether the Indians received them from the mountain civilization, or if they are derived from a primitive form of culture common to both the mountain area of civilization and the Indians of the Chaco. Culture elements of this kind are the sling, the bola, and the carrying-net.

Whence the Indians in the western area of civilization themselves received the culture-elements which I hope I have shown that the Choroti and Ashluslay received from them, is a problem which I will not even attempt to deal with here. It can only be solved by systematic comparative studies in the civilization of the South and Central American peoples. This work, however, has hitherto not been taken in hand.

It has long been suspected that the Chaco Indians have been culturally influenced by the mountain culture of the west, though no one has attempted to deal with this problem in a really systematic way. **Sánchez Labrador** tells us that the Mbayá, according to their own tradition, came from the west, and he adds:— «y acaso por esta tierra vendrian desde el Perú los Mbayás y desde entonces traerían la inclinación á engalanarse con plata y metal amarillo.»[1])

Boggiani[2]) finds great similarity between the Mbayá Indians' ornamentation on earthenware and woven fabrics and that on certain similar objects in Peru. Koch-Grünberg[3]) subjects these statements to a sharp criticism. He maintains that the ornaments of the Mbayá Indians «fall into two classes that have nothing to do with each other. The one class is represented by circular, snail, or floral ornamentation, sometimes degenerating into the most fantastic arabesque, and certainly having nothing in common with Peruvian ornaments. These designs are really not Indian at all; they are, perchance, connected with the Italian renaissance and are to be ascribed to the missionaries whose influence on the Indian tribes of Paraguay and the northern part of the Chaco for more than a century is usually underrated. To what extent the second class of Kadiuéo-ornamentation, — the simple «step and stripe» pattern, which is met with in greater perfection among the neighbouring Tereno and Payaguá of Asuncion and, in a somewhat poorer form among the Guaná and Sanapaná of the Chaco — is connected with Peruvian art requires an exact comparative study to decide. . . Such a connection is not impossible, for it may be assumed that the mighty Peru in the sphere of politics and art exercised an influence stretching far beyond her own borders». The supposition of Lafone-Quevedo and Boggiani[4]) that the Chanca Indians, being driven out of Peru, settled in the Chaco and are to be identified with the Mokovi, Toba, Abipone and Mbayá is, as Koch-Grünberg has pointed out, very fantastic.

Grubb[5]) has also taken up this question. He says:—

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[1]) Vol. 2, p. 289.

[2]) (4), p. 30.

[3]) (1), p. 8.

[4]) (4), p. 31.

[5]) p. 50.

177 «There are many interesting facts which seem to point to an ancient connection between the Indians of the Chaco and the Incas. Their methods of weaving and the patterns introduced in their blankets are almost identical with those seen in the relics of ancient Peru. This similarity is also very marked in the case of the string bags which they make and use at the present day, and there is some slight resemblance in their pottery. The Lengua Indians of the Chaco wear a woven band of wool round the head, and especially prize those ornamented with the feathers of a comparatively rare bird. They also practise the boring of the ears and the distending of the lobe to an enormous size, in order to insert ear-discs of light wood. . . Both these ornaments were highly prized by the Peruvians.»

This is correct. The following reflections, on the other hand, are rather whimsical.

«Among the superstitions of the Chaco Indians, I mention three which seem to point to a Peruvian origin. They appeal to the moon in matters of marriage and the moon was held by the Peruvians to be the sister-wife of the sun. Secondly, the Indians greatly fear the rainbow, when seen in the West, and the armorial ensign of the Incas was the rainbow. In the third place, referring to their superstitions connected with the Pleiades Dobrizhoffer writes: «They (the Peruvians) may have taught the inhabitants (of the Chaco) a religious observance of the Pleiades.»

Furthermore **Grubb** states interalia that among the Lengua «there is a distinct trace of a superior people running in a north-westerly direction towards Peru, of fairer skin, finer features, greater intelligence, and of more self-reliant and aggressive character. The result of inquiries into the family connections of the people along this north-westerly line is that they all originated from the same stock, and among them I have found traditions and beliefs, which do not seem to be generally held by the tribes.»

These superior Indians may very well be Chané (Arawaks) who have adopted the language of the Lengua Indians. This is, at least, more credible than their descent from Incan refugees. On the other hand, it is, perhaps, not impossible that when the Spaniards conquered the Incas, some Indians fled thence to tracts lying east of the Andes. There are a good many traditions of such an emigration. Such refugees would naturally be of great importance as bearers of culture.

The Lengua tales of «the cities of the dead», built of solid material, viz., brick, are not impossible. They may, of course, refer to the great stone houses of the Incas. Very early reports from the coast of Brazil, the Rio Paraguay, and the River Amazon show that this was known to Indians far to the east of the Andes through more or less fantastic tales.

It appears from «Zeytung aus Presillg Landt», a paper attributed by Varnhagen[1] to 1506 and by Sophus Ruge[2] to earlier than 1515, that the Portuguese had heard, even at that early date, among the Indians on the east coast of America rumours of the Inca kingdom, the golden lands in the west.

It is even related that the captain of a Portuguese ship brought home a silver axe for the King of Portugal. This must have been the first article from the Inca kingdom to come to Europe. I am reproducing here that part of the publication which refers to the rich lands of gold and silver. That it refers to the Incan empire is undeniable.

«Ir solt auch wissen, das sie genügsam anzaygung pringen, das sie vō Cabo, wie gemelt ist, gegen vns bey Zway hundert meyll sein, daselbst in ainer port vnd fluss gewesen sein, do haben sie anzaygen von vil Sylber vn̄ gold, auch upffer, so im lanndt dynnen ist. Sie sagen das der Haubtman von dem anndern Schiff dem kunig von Portugal ein Sylbere Axt oder peyhel pring, zu gleicher weyss wie Ir Axt von staynen sein. Bringt im auch ein metal, sagen sehe wie messing, vnd

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[1] Page 50.

[2] Page 18.

177 emtphahe keyn Rost noch verletzung, wissen nicht ob es nyder Goldt ist oder was es ist. Sie haben auch an dem selben ort an der See erkandt von dem selbigen volck ein anzaygung das im landt dynnen ein pyrg volck sey, hab vill golds, trag das gold dun geschlagen, zugleicher weyss wie harnisch an der styrn vn̄ forn an der prust. Der Haubtman pringt auch einen man von dēselbigen landt, der hat den kunig von Portugal ye sehen wöllen. Der sagter wöll dem kunig von Portugal so vil golds vnd Sylber anzaygen geben, das im Landt sey, das seine Schiff nit furen mögen.»

It was the rumours of an Incan Empire that gave rise to the journey of Alejo Garcia through the Chaco from the Rio Paraguay to the Andes. (1522).[1]) UHLE has dealt with the problem of the influence of Incan civilization on tribes east of the Andes in a short treatise published at Lima. Unfortunately I have not had access to this while compiling the present work.

DEBENEDETTI[2]) has pointed out the great similarity undoubtedly existing between the pottery he found at Tilcara in Quebrada de Humahuaca and that of the Chiriguano Indians. He compared, moreover, the earthenware found there with that used by the Choroti[3]). We must, however, recollect that the Chiriguano Indians derived their modern pottery from the peoples — the Chané especially — whom they subjugated when they conquered their present territory. There is, therefore, nothing remarkable in the fact of their pottery resembling that of the Humahuaca Indians.

I myself, in an earlier work, dwelt on the fact that there are, among the Chaco Indians, several elements of culture which they have obtained from the western area of civilization. As far as we know, the Gran Chaco was never conquered by the Incas. Neither historical nor archaeological proofs of such a conquest exist.

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[1]) DOMINGUEZ; NORDENSKIÖLD (13).

[2]) (2).

[3]) The vessel depicted by Debenedetti (2) Fig. 76 cannot, as he asserts, be derived from the Choroti, but must be from the Chiriguano or Chané.

In all likelihood the influence of the mountain civilization was felt in the Chaco as the result of peaceful penetration, at least by the time of the discovery of America. There was considerable trade between the Indians of N. W. Argentina, who were strongly influenced by Incan culture, and the tribes of the Chaco. Of course, we have little historical proof of this. Yet it is demonstrable that trade extended as far as the Rio Paraguay. If we may believe RAMIREZ, who described the Cabot expedition (1526), the Indians living about the R. Paraguay travelled to the Inca country for the purpose of trading.

Thus he asserts[1] that from the villages of the Chandule on the Rio Paraguay women and children betook themselves to the mountains to get metal. The Chandule were Guarani Indians. It sounds odd that women and children should have undertaken the long journey through the Chaco to the Andes. Still we must bear in mind that safe-conduct for traders is or has been an idea not strange to the Indians. Nor is it impossible that RAMIREZ'S informant meant that Indians with their wives and children journeyed to the mountains to carry on trade, just as, nowadays, many Indians take their families along when they leave the Chaco to go and seek work at the sugar-mill. These metals and articles of gold and silver the Chandule bartered with other Indians dwelling far south of the Paraguay river. They gave in exchange «quentas» i. e., shell-beads and canoes[2]).

This trade was, of course, not new in 1526, but it must have flourished in pre-Columbian times. It is quite feasible that in this way metal objects from the Inca country found their way to the coast of Brazil. Thus **Uhle**[1]) describes a copper axe, found in the southern part of the province of São Paulo, which is plainly derived from the mountain civilization of western S. America. The eminent German scientific explorer v. Ihering[2]), the creator of the São Paulo Museum, also holds that influences from the mountain civilization are to be traced in the archaeological discoveries made in S. Brazil.

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[1] P. 33. «se informó que tenian mucho metal porque segun los indios lo decian de las dichas caserías hiban mugeres y niños fasta la dicha sierra é traian el dicho metal»

[2] RAMIREZ, p. 33.

It is likely also that Incan traders occasionally visited the tribes of the Chaco, or at least the Chané who dwelt on the borders of the Incan empire. Such traders may be supposed to have enjoyed safe-conduct.

Cieza de Leon[3]) relates how the Inca Huayna Capac sent Orejones to the east as his emissary. He says that they proceeded as traders — «en hábito de mercaderes» — and thereby plainly indicates that, as such, they were to travel unmolested.

We know for certain that there was trading between the Indians of the western area of civilization and the Indians of the Chaco shortly after the conquest of the Incan empire, and it is probable that the Indians were merely continuing commercial relations that had long existed.

Lozano[4]), for instance, affirms that shortly after the founding of the town of Jujuy in 1593 Juan de Baños came there from Chuquisaca. He observed that, now and then, many of his Indians disappeared and were away for about two months. When asked why they did so, they answered that they went to «Chacu» to trade with the inhabitants, among whom they had many friends and acquaintances.

Indians from the interior of the Chaco seem also to have sought these superior tribes in order to barter deer-skins, ostrich-feathers etc. Thus **NARVAEZ**[1]) relates in «Relacion de las provincias de Tucuman» of the Indians about the Rio Bermejo: — «Estos indios suelen venir á la tierra de paz y traen cueros de venados y plumas de avestruces y garzas y otras de estima, y cueros de unos gatillos de monte buenos para aforros.»

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[1]) (8).
[2]) (3). p. 570.
[3]) (2). p. 230.
[4]) p. 1.

LOZANO[2]) also relates that in the year 1657, in the forests around Esteco, three hundred Calchaqui Indians were met with who had come there from their own hill-country to get wood for their bows. **BOMAN**[3]) rightly presumes that most of the wooden articles found in the old excavations of the woodless tracts in the northernmost part of Argentina were brought from the Chaco or from Jujuy and the Salta valleys. The influence of the mountain civilization certainly continued long after the conquest. In N. Argentina the Calchaqui Indians whose civilization was of the Bronze Age, long maintained their independence of the whites and certainly preserved for a long time much of their ancient culture.

As a matter of fact, tribes of N. Argentina, culturally and linguistically related to the Choroti and Ashluslay, lived in immediate contact with the mountain civilization, as is proved by the investigations of **KERSTEN** and **BOMAN**. Thousands of Indians now come every year from different parts of the Chaco to the sugar-mills of N. Argentina to seek work. These periodical wanderings from the Chaco have, most surely, been going on for a long time. We know that as early as the second half of the 16th century the wild Sulense[4]) from the Chaco sought work from the whites in the neighbourhood of Tucuman.

[1]) p. 146.

[2]) **LOZANO**, after **BOMAN**, p. 644.

[3]) p. 643.

[4]) Annuæ Litteræ Societatis Jesv 1580, p. 420:— «Adeunt interdũ ad Hispanos, certis temporibus, operis faciendi».

177 It seems to me not unlikely that Indians from the Chaco in pre-Columbian times likewise sought work in the same tracts from superior tribes compelled to this by the famines which almost periodically visited their country. To this very day the Tapiete, who are on a lower level of civilization, come to seek work and food from the more prosperous Chiriguano.

The great annual migration from the Chaco to the sugar-mills in Argentina had thus, at any rate, its counterpart in pre-Columbian times. In that case it must have contributed in a high degree to the spreading of culture-elements from the western area of civilization to the tribes of the Chaco.

It is very possible that the Choroti, Ashluslay and related tribes were culturally influenced by the mountain civilization via the Chané. These latter lived and still live at the foot of the Andes and, in all likelihood, at the time of the discovery of America were in immediate contact with Bronze-Age culture. Most the culture-elements which, in our opinion, the Choroti and Ashluslay received from the Bronze Age culture of the west we find, as was aforementioned, also among the Chané and the Chiriguano.

The latter Indians, however, only migrated from Paraguay to the country they now inhabit during the 16th century. Since then the Chiriguano have learnt a good deal from the Chané.

It is known that a large number of Chané Indians accompanied Garcia from the mountains to the Rio Paraguay where they sought refuge among the Sococies and the Xaquetes Indians[1]). NUÑEZ CABEZA de VACA found on the Rio Paraguay a couple of villages inhabited by these refugees[2]).

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[1]) NUÑEZ CABEZA de VACA, Vol. 1 p. 277. From Puerto de los Reyes.

[2]) A media legua estaua otro pueblo mas pequeño de hasta setenta casas, de la misma generacion de los Jacocies. Y a quatro leguas estan otros dos pueblos de Chaneses que poblaron en aquella tierra, de los que atras dixe que truxo Garcia de la tierra adentro y tomaron mugeres en aquella tierra» NUÑEZ CABEZA DE VACA, Vol. 1, p. 201.

The Chané who probably dwelt in immediate contact with the mountain civilization may have played a very great part as bearers of civilization. The fact is that the Chané penetrated the whole of N. Chaco, where, although culturally superior, they were in a peculiar way the vassals of the Mbayá Indians.

I am therefore of the opinion that the great influence of Bronze Age culture in the Chaco may be explained partly by the visits of Chaco Indians to the superior tribes of the the west for the purpose of trade and to seek work, and partly by the penetration of the whole of N. Chaco by the Chané Indians who had long dwelt in contact with the mountain civilization. Thanks to the circumstance of their having long dwelt within the sphere of influence of the mountain civilization these Arawaks possessed a civilization which

kindred tribes in N. E. Bolivia, Mojos and Baure. Consequently they are bearers, not of probably Arawak culture elements, but in a far greater degree of such as they have borrowed from the mountain civilization.

The negative influence of the Bronze Age culture in the Chaco is hard to estimate. Most likely it has not been very considerable. The Indians of the mountain civilization were not able to dump their ready-made tools and clothes, etc., in the Chaco, as the whites have done.

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Elements of Culture received by the Indians of the Gran Chaco from the northern part of S. America.

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In the foregoing I have collected the culture-elements received by the Choroti and the Ashluslay from the whites as well as from the Bronze Age culture of the west and southwest. In the following I shall review those culture-elements whose distribution is markedly northern.

The undoubted acquisitions of the Choroti and Ashluslay from this quarter do not appear to be many. The most important would seem to be the loom and the cultivation of the manioc. The latter is, however, of no great significance to these Indians, as the manioc cannot everywhere be cultivated within their boundaries. Later on, it will probably be proved that many of the culture-elements whose distribution is imperfectly known come under this heading.

Most likely it is the Chané Indians and, possibly, the Guarani peoples who, in this case, have been the bearers of culture.

Table 3.

Northern and eastern culture-elements = +.

1)	Dwellings.	–
2)	Beds.	–
	Cultivated plants and agricultural implements.	
	Manioc.	+

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4) Implements used in harvesting wild plants. ...... —
5) Hunting weapons and implements. ....
6) Weapons seldom or never used for hunting .... —
7) Fishing tackle. ....
Fishing with baskets put over the fish. .... + ?
8) Domestic animals and articles connected with them —
9) Tools. ....
10) Implements for making fire. ....
11) Hearths and articles connected with them. ...... —
12) Implements and vessels used in the preparation and consumption of food.
    (a) Used in the preparation of meal.
        Grater for manioc. (Map 11) .... +
        Wooden mortars. (Map 10) .... +
    (b) Cooking pots .... —
    (c) Wooden spit. .... —
    (d) Vessels out of which food is eaten. ...... —
    (e) Implements with which food is eaten. —
13) Means of indulgence. .... —
14) Clothes.
Palometa stockings. .... + ?
15) Articles connected with the deforming of the body. .... —
16) Tattooing instruments .... —
17) Ornaments for the body .... —
18) Toilet articles
Stamp for painting the face. (Map 24).......... + ?
19) Apparatus for carrying things
Band for carrying children .... +
20) Articles used for keeping things in............. —
21) Games and playthings
Maize-leaf ball. (Map 29) .... +
22) Signalling and musical instruments, etc. .... —
23) Trophies .... —
24) Property marks................. —

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25) Various kinds of handiwork.

a)	The making of rope and string and spinning. Spindle with a knob on the upper end of the spindle rod. (Map 35)	+
b)	Sewing or the use of the eyed needle	—
c)	Knitting and plaiting. Technique 9. (Fig. 60.9)	+
d)	Twisting of rope and string	—
e)	Weaving	+
f)	Pottery	—
g)	Wood-carving	—
h)	Bone and shell-bead work	—
i)	Carving and ornamenting of calabashes	—
j)	Feather work	-
k)	Leather work	-

The undoubted acquisitions of the Choroti and Ashluslay from northern S. America do not amount to very much.

On the other hand, we find a number of important culture-elements among the Chiriguano and Chané Indians who dwell on the borders of the Chaco. Their original home was in the northern part of S. America and they were not taken up by the Choroti, Ashluslay or kindred tribes. These culture-elements include:

Hammocks.

The seat.

Multi-pointed arrows.

Bow with sharply defined notches at the ends.

The panpipe. (Materials found in the Gran Chaco). The Indians may, however, have received the panpipe from the Bronze-Age culture in the west.

Basket work of various kinds.

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From this it seems to me perfectly clear that the Choroti and the Ashluslay, like their neighbours the Toba, Mataco, and Lengua, did not migrate from the north to the region

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they now inhabit. Otherwise their standard of civilization would not be so sharply distinguished from that of the tribes dwelling to the north of them.

If those elements of culture are eliminated which the Choroti and Ashluslay have received from the whites, from the mountain civilization, and from northern and eastern S. America, the remaining culture-elements are certainly, for the most part, very ancient. They are partly culture-elements so widely distributed in S. America that we cannot say whence they originally came, partly culture-elements especially characteristic af the Gran Chaco and not found elsewhere in S. America, and partly such as prove that the Chaco Indians, before they were influenced by the whites, the mountain civilization, and the Chiriguano and Chané Indians, possessed a civilization which was closely connected with that of the Patagonians.

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Elements of Culture specially characteristic of the Choroti, Ashluslay and kindred tribes.

The characteristic culture-elements of the Chaco are in the following table denoted by = +.

Table 4.

1)	Dwellings.	
	»Porch-entrance» to huts	+
2)	Beds	—
3)	Cultivated plants and agricultural implements	—
4)	Implements used in harvesting wild plants.	
	Hooks for gathering fruit	+
	Fork for digging caraguatá	+
	Implements for pulling up grass	+
5)	Hunting weapons and implements	—
6)	Weapons seldom or never used for hunting	—
7)	Fishing tackle.	
	Club for killing fish	+
	Needle for stringing fish	+
8)	Domestic animals and articles connected with them	—
9)	Tools.	
	Wooden knives (Shape from the mountain civilization)	+
	Wooden awls	+
10)	Implements for making fire	—
11)	Hearths and articles connected with them	—

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12)	Implements and vessels used in the preparation and consumption of food.	
	a) Used in the preparation of meal.	
	Earth mortars	+
	b) Cooking utensils	—
	c) Spit	—
	d) Vessels out of which food is eaten	—
	e) Implements with which food is eaten.	—
	Wooden knife used when eating watermelons	+
13)	Means of indulgence and articles in connection therewith: Pipe-cleaner	+
	Pipe-filter	+
14)	Clothes	—
15)	Articles connected with the deforming of the body	—
16)	Tattooing instruments.	—
17)	Ornaments for the body.	
	Ankle bands of feathers	+
	Brow ornaments of human hair	+
18)	Toilet articles	—
19)	Apparatuses for carrying	—
20)	Articles used for keeping things in.	
	Bags of certain shapes	+
21)	Games and playthings.	
	Dolls made of toe-joints	+
	Tattooed dolls	+
22)	Signalling and musical instruments, etc.	
	Earthenware drum	+
23)	Trophies	—
24)	Property marks	—
25)	Various kinds of handiwork.	
	a) The making of rope and string and spinning	—
	b) Sewing or the use of the eyed needle	—
	c) Knitting and plaiting	
	Technique (Fig. 60.3)	+
	Technique (Fig. 60.6)	+
	d) Twisting of rope and string	—

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- e) Weaving .... —
- f) Pottery
  - Armadillo tail for the polishing of earthenware .... +
  - Wooden tools for the polishing of earthenware .... +
  - Finishing and polishing of earthenware with resin .... +
- g) Wood carving .... —
- h) Bone and shell-bead work .... —
- i) Carving and ornamentation of calabashes.. —
- j) Feather work .... —
- k) Leather work .... —

Many of the characteristic culture-elements of the Chaco are adaptions due to the natural conditions prevailing there. Probably some of them have their origin elsewhere, though proof of this cannot be adduced.

As regards the shape and ornamentation of objects, details can be indicated in almost every article which are characteristic of the Choroti and Ashluslay, or at least of them and their above-mentioned kindred tribes. If a collection of objects from the Chiriguano and the Choroti were mixed together, I should be able to distinguish them without the least difficulty and without making a single mistake. On the other hand, if a number of Choroti and Ashluslay articles were mixed, I should not be able to make such a selection even with the aid of my large collections from these Indian tribes.

XXXII.

Elements of Culture received by the Indians of the Chaco from the southern part of S. America.

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There is no multiplicity of culture-elements of southern origin among the Ashluslay and Choroti.

They give the impression of ancient elements of culture-relics from a time when the Choroti and Ashluslay probably possessed a civilization similar to that of the Ona and Patagonians (before the introduction of the horse), when they were still living in a colder climate than the one where they now dwell, a climate where it was an advantage to be in skins.

The ball-game with the (hockey-like) stick is probably derived from the mountain civilization, though it now occurs only in the Chaco and among the Araucanians.

Table 5.

Southern Culture-elements occurring among the Choroti and Ashluslay +.

1)	Dwellings.	—
2)	Beds	
	Skin mats	+
3)	Cultivated plants and agricultural implements	—
4)	Implements used in the harvesting of wild plants	—
5)	Hunting weapons and implements.	
	Bowstring of strips of skin	+
	Bow without notch at the end?	+

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6)	Weapons seldom or never used for hunting.	—
7)	Fishing tackle	—
8)	Domestic animals and articles in connection with them.	—
9)	Tools.	—
10)	Implements for making fire.	—
11)	Hearths and articles connected therewith.	—
12)	Implements and vessels used in the preparation and consumption of food.	—
	a) Used in the preparation of meal.	—
	b) Cooking utensils.	—
	c) Wooden spit.	—
	d) Vessels out of which food is eaten.	—
	e) Implements with which food is eaten.	—
13)	Means of indulgence and articles in connection therewith	—
14)	Clothes.	
	Cloak made of several skins sewn together. (Map 15)	+
	Women's garment of skin (loin-cloth)	+
	Leather girdles of various kinds...............	+
15)	Articles connected with the deforming of the body	—
16)	Tattooing instruments	—
17)	Ornaments for the body	—
18)	Toilet articles	
	Hairbrush......................................	+
19)	Apparatus for carrying	—
20)	Articles used for keeping things in	
	Bag of Ostrichneck skin	+
	Bags of whole skin of small animals............	+
21)	Games and playthings.	
	Ball-game with hockey-like stick (Map 28)	+
22)	Signalling and musical instruments, etc.	—
23)	Trophies	—
24)	Property marks	—
25)	Various handicrafts.	
	a) Manufacture of rope and string and spinning	—

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	Twisting of skin thongs	+
b)	Sewing or the use of the eyed needle	—
c)	Knitting and plaiting	—
d)	Twisting of rope and string	—
e)	Weaving	—
f)	Pottery	—
g)	Wood-carving	—
h)	Bone and shell-bed work	—
i)	Carving and ornamentation of calabashes	—
j)	Feather work	—
k)	Leather work	+

XXXIII.

Culture-elements among the Choroti and Ashluslay, the origin of which it is at present impossible to fix.

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We have been able to select certain culture-elements which the Choroti and Ashluslay received from the whites, a large number of which evidently came to the Chaco from the western area of civilization; some, again, derived from the northern and some from the southern part of S. America; and finally, some which seem to be peculiar to the tribes of the Chaco. There are still, however, a large number of culture-elements left.

We know, for instance, from what quarter the Choroti and Ashluslay learned the use of the handle on earthenware; but we do not know whence the art of making earthenware came to them. The distribution of the handle is markedly western, while the art of making pottery in general has been known all around the Chaco. Of course the Chaco Indians need not necessarily have adopted the manufacture of earthenware from the western area of civilization because their pottery was plainly influenced from that quarter. The same holds good concerning their use of the calabash, spinning, etc.

There is, as we saw in the foregoing, a large number of culture-elements among the Choroti and Ashluslay concerning which the literature on the subject gives so little information that it is impossible, at present, to indicate their distribution on the map. Culture-elements of this kind are, for instance,

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network and dwellings. They are, accordingly, indicated in the following table.

Many culture-elements now occur almost everywhere in S. America where the natural conditions for their occurrence are found. Consequently, it is impossible to distinguish the source where the Choroti and Ashluslay have derived them. To this category belong most cultivated plants and many other certainly ancient elements of culture.

Table 6.

1) Dwellings.	
Chaco huts (Ancient element of culture)	+
Cooking sheds (Distribution imperfectly known)	+
2) Beds.	
Rush mat. (Distribution imperfectly known)	+
3) Cultivated plants and agricultural implements.	
Maize	+
Zapallo (Cucurbita)	+
Cotton	+
Beans	+
Tobacco	+
Calabash fruit	+
Sweet potatoes	+
Digging stick	+
Club for breaking up clods (Distribution imperfectly known)	+
Implement for seeding corn-cobs (Distribution imperfectly known)	+
4) Implements used in harvesting wild plants	—
5) Hunting weapons and implements.	
Bow and arrow in general (ancient culture-elements)	+
Arrow for shooting birds	+
Bola	+
Sling (Map 4)	+
Wristlets used by bowman (Distribution imperfectly known)	+

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	Snares (Distribution imperfectly known)........	+
6)	Weapons seldom or never used for hunting.	
	Bone dagger. (Distribution imperfectly known)..	+
	Fire arrow	+
	Lance (Post-Columbian history imperfectly known)	+
	Leather armour (Post-Columbian history imperfectly known)	+
7)	Fishing tackle.	
	Fishing by means of damming the stream. (Distribution imperfectly known)	+
	Landing -net. (Distribution imperfectly known)..	+
8)	Domestic animals.	
	Dog. (Pre-Columbian distribution imperfectly known)	+
9)	Tools.	
	Jaw of the palometa..........................	+
	Bone awl. (Distribution imperfectly known)......	+
10)	Implements for making fire.	
	Do. made from wooden rods (ancient culture element.)	+
11)	Hearths and articles connected with them.	
	Wooden spit (Map 7) (ancient culture-element) ..	+
	Pit- oven. (Map 8)	+
12)	Implements and vessels used in the preparation and consumption of food	
	a) Used in the preparation of meal	—
	b) Cooking utensils in general	+
	c) Vessels out of which food is eaten	
	Use of the calabash in general	+
	d) Implements with which food is eaten......	
	Mussel-shell spoon (Distribution imperfectly known)	+
	Calabash spoon (Distribution imperfectly known)	+
	Eating-brush (Distribution imperfectly known) ..	+
13)	Means of indulgence	
	Tobacco-pipe (Map 14)......................	+

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14)	Clothes.	A
	Woven mantle (Post-Columbian history imperfectly known)	c + 105
	Women's garment; so-called «tipoy»	+ 177
15)	Articles connected with the deforming of the body	
	Ear-block. (ancient culture-element) (Map. 18)	+
16)	Tattooing (Map 19)	+
17)	Ornaments for the body.	
	Necklace of bored teeth	+
	Necklace and other ornaments of grains of corn, leather, etc	+
	Rings of segments of the tail-skin of the lizard	+
18)	Toilet articles.	
	Stick-combs (in general)	+
19)	Apparatus for carrying.	
	Carrying-net (ancient culture-element) (Map 25)	+
20)	Various articles for keeping things in	+
21)	Games and playthings.	
	Cat-cradle game. (Distribution imperfectly known)	+
	Stilts (Distribution imperfectly known)	+
	Bull-roarer (Distribution imperfectly known)	+
	Dolls in general	+
22)	Signalling and musical instruments, etc.	
	Rattle gourd (Ancient culture element). (Map 31)	+
	Girdles of the claws of animals	+
	Whistles in general	+
	Flutes in general	+
23)	Trophies.	
	Scalping	+
24)	Property marks. (Map 34)	—
25)	Various kinds of handiwork.	
	a) Manufacture of rope and string and spinning (in general)	+
	b) Sewing or the use of the eyed needle	—
	c) Knitting and netting.	

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Several kinds of knitting and netting. (Distribution imperfect-ly known) .... +

Mesh-stick (Distribution imperfectly known) .. +

d) Twisting of ropes and string (in general).... +

e) Weaving .... --

f) Pottery (in general) .... +

g) Wood carving (in general) .... +

h) Bone and shell-bead work (in general) .... +

i) Carving and ornamentation of calabashes (in general) .... +

j) Feather-work (very imperfectly known).... +

k) Leather-work (in general)................ +

XXXIV.

The End.

An endeavour to reconstruct the civilization of the Choroti and Ashluslay Indians before their coming under the immediate, or mediate influence of the whites gives the following results. They kept no cattle. They tilled the ground to no great extent and lived chiefly by collecting wild fruits and by fishing and hunting. They had no iron tools. They probably made their clothes out of caraguatá, cotton, and skins.

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Prior to their coming into contact with the «civilized peoples». of western S. America, it is possible that they did not even till the ground, but lived entirely by the gathering of wild fruits, and by hunting and fishing. They had then no knowledge of the Caraguatá shirt, nor of most of the ornaments, musical instruments, games, etc, which they now possess. We may presume that they held their own fairly well in the struggle for life, but their life was poorer than it became after they had learnt the way of making and using a number of «articles of luxury» from the mountain civilization.

In only one respect can the influence from the north and east be said to have essentially modified their civilization, viz. in their having learned to cultivate the manioc and perhaps some other plants as well. Possibly, too, it was from there that they acquired the art of weaving. The occurrence of culture-elements like the fur-mantle, the bow-string of strips of skin, skin mats, etc. — things of small prac-

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tical use in tropical countries — in the Chaco, north of the Tropic of Capricorn, points to the Choroti and Ashluslay having migrated to the Chaco from a district with a colder climate.

As a matter of fact there are, in the Chaco, culture-elements which prove that the Indians well understood how to adapt themselves to the peculiar natural conditions prevailing there.

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During my journeys I also carried on investigations, like those I made among the Choroti and Ashluslay, among other tribes visited by me. It appears plainly enough, from the maps and tables I have given above, that the influence of the mountain civilization in N. E. Bolivia was far less marked than in the Chaco.

In N. E. Bolivia also there are Indians who preserve original culture-elements. Such are the Cháma Indians, who are not thoroughly settled.

It is much to be desired that all the ethnographical material from S. America, collected in literature and in the museums, might be made the subject of an investigation according to the same method as I have employed here. Anyone possessing a thorough knowledge of a district and its natural conditions would then endeavour to give a clear account of the same. Maps of varying degrees of excellence have been published already, showing the geographical distribution of certain culture-elements, but no attempt has been made to draw up the history of tribes within a given area from the cartographical material at hand. It is important that the endeavour should be made to analyse the cultural life, as a whole, of the tribe or tribes, and not merely some few arbitrarily chosen culture-elements. Further, the investigator should always have actual knowledge of the natural conditions in which the tribe or tribes live.

The maps and information — original and derived from literature on the subject — which I am now publishing will, of course, lighten the labour of those who may study adjacent districts, just as previous accounts of the geographical distribution of certain culture-elements have been useful to me. OTD By and by maps will be purged of their errors and information become more complete. Finally the cartographical material will have reached such a pitch of perfection that we may get from it a thorough knowledge of the history of the S. American Indians.

I believe that an accurate cataloguing, carried out on a large scale, of the distribution of all the various articles, as well as of the various small inventions, over the whole South American continent, would give us a very exact comprehension of the history of the material civilization of this continent. This work would require much time and patience; and the greater the collections of material become, the less opportunity will there be for the play of fancy. Finally, however, the results will attain such a pitch of accuracy that they must satisfy the most critical investigator.

For myself, one of the main results of this work is that I have gained an insight into the vast amount of collecting and classifying that remains to be done before we can really say that we know the geography of the material civilization of S. America.

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Page 53, l. 6 from bottom, *read* Map 6 *for* Map 5
» 203, l. 4 » » » Tassel » Brush and Broom
» 203, l. 3 » » » Tassels » Brooms
» 237, l. 3 » » » Pyrograving *for* Encaustic ornamentation.

[For distributional evidence concerning the Chaco Indians, see 2:Nordenskiöld in the SK6 Choroti file, entire volume. --Analyst]

[For distributional evidence concerning South Americain Indians in general, see 2:Nordenskiöld in the SK6 Choroti file, entiire volume.--Analyst]

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[For distributional evidence concerning the Choroti, see Category 116, entire book. --Analyst]